NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

INDEX OF NACA TECHNICAL PUBLICATIONS

1915 - 1949



WASHINGTON, 1949

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

The Index of NACA Technical Publications covers reports issued from the date of origin of the Committee in 1915 until approximately September 1949.

Because omissions were noted after publication of the Index issued in 1947, and since many new reports have been released since that time, it was decided to issue a new volume to supersede completely the 1947 Index, with supplements to be issued regularly in the future.

Commencing with all publications issued after September 1, 1949, subject classifications were revised, the most important change involving the transfer of aircraft loads reports from the Aerodynamics classification to Structures. For those maintaining a file of NACA index cards, it is recommended that cards issued for reports dated prior to September 1, 1949 be removed from the file. This volume includes the same index information. Supplements covering periods following September 1, 1949, will be arranged according to the revised subject classifications.

On the pages immediately following, the subject classifications are indexed in order of breakdown. There is included in the back of this volume an alphabetical arrangement of the subject classifications.

Division of Research Information National Advisory Committee for Aeronautics Washington, D. C. March 31, 1950

CONTENTS

0.1:1			T 0.111		
Subject			Subject	0.111	Done
No.	Subject	Page	No.	Subject	Page
			Part Part Tour		
1	AERODYNAMICS	- 1	1.2.2.2.3	Sweep	82
			1.2.2.2.4	Taper	86
1.1	FUNDAMENTAL	2	1.2.2.2.5	Inlets and Exits	88
1.1.1	Incompressible Flow	4	1.2.2.2.6	Surface conditions	89
1.1.2	Compressible Flow	6	1.2.2.3	HIGH LIFT DEVICES	91
1.1.2.1	SUBSONIC FLOW	8	1.2.2.3.1	Flaps	91
1.1.2.2	MIXED FLOW	- 11	1.2.2.3.2	Slots and Slats	96
1.1.2.3	SUPERSONIC FLOW	13	1.2.2.4	CONTROLS	98
1.1.3	Viscous Flow	16	1.2.2.4.1	Flap Type	99
1.1.3.1	LAMINAR FLOW	18	1.2.2.4.2	Spoilers	103
1.1.3.2	TURBULENT FLOW	20	1.2.2.5	REYNOLDS NUMBER EFFECTS	104
1.1.3.3	JET MIXING	22	1.2.2.6	MACH NUMBER EFFECTS	106
1.1.4	Aerodynamics with Heat	22	1.2.2.7	WAKE	111
1.1.4.1	HEATING	23	1.2.2.8	BOUNDARY LAYER .	113
1.1.4.2	HEAT TRANSFER	23			
1.1.4.3	ADDITIONS OF HEAT	25	1.3	BODIES	114
1.1.5	Flow of Rarefied Gases	25	1.3.1	Theory	114
1.1.5.1	SLIP FLOW	26	1.3.2	Shape Variables	117
1.1.5.2	FREE MOLECULE FLOW	26	1.3.2.1	FINENESS RATIO	118
1.1.5.2	TREE MOLECULE FLOW	20	1.3.2.2	CROSS SECTION	118
			1.3.2.3	THICKNESS DISTRIBUTION	119
1.2	WINGS	27	1.3.2.4	SURFACE CONDITIONS	119
1.2.1	Wing Sections	27	1.3.2.5	PROTUBERANCES	120
1.2.1.1	SECTION THEORY	27	1.3.3	Canopies	121
1.2.1.2	SECTION VARIABLES	31	1.3.4	Ducted Bodies	121
1.2.1.2.1	Camber	32	1.3.4.1	NOSE SHAPE	122
1.2.1.2.2	Thickness	34	1.3.4.2	TAIL SHAPE	123
1.2.1.2.3	Thickness Distribution		1.3.4.3	SIDE INLETS	123
1.2.1.2.4	Inlets and Exits	38	1.3.4.4	SIDE EXITS	123
1.2.1.2.5	Surface Conditions	38	1.3.5	Hulls	123
1.2.1.3	DESIGNATED PROFILES	40	1.3.5	nutis	123
1.2.1.4	HIGH LIFT DEVICES	46			105
1.2.1.4.1	Plain Flaps	46	1.4	INTERNAL AERODYNAMICS	125
1.2.1.4.2	Split Flaps	48	1.4.1	Nose Inlets	126
1.2.1.4.3	Slotted Flaps	50	1.4.1.1	CENTRAL	126
1.2.1.4.4	Leading Edge Flaps	52	1.4.1.2	ANNULAR	127
1.2.1.4.5	Slots and Slats	53	1.4.2	Leading Edge Inlets	128
1.2.1.5	CONTROLS	54	1.4.3	3ide Inlets	128
1.2.1.5.1	Flap Type	54	1.4.3.1	SCOOPS	128
1.2.1.5.2	Spoilers	58	1.4.3.2	SUBMERGED	129
1.2.1.6	BOUNDARY LAYER	59	1.4.4	Ducts	129
1.2.1.7	REYNOLDS NUMBER EFFECTS	62	1.4.4.1	DIFFUSERS	130
1.2.1.8	MACH NUMBER EFFECTS	66	1.4.4.2	NOZZLES	131
1.2.2	Complete Wings	69	1.4.4.3	PIPES	132
1.2.2.1	WING THEORY	70	1.4.4.4	BENDS	133
1.2.2.2	WING VARIABLES	75	1.4.5	Exits	134
1.2.2.2.1	Profiles	76	1.4.6	Jet Pumps and Thrust	
1.2.2.2.2	Aspect Ratio	79	I STATE OF THE PARTY	Augmentors	134

Subject			Subject		
No.	Subject	Page	No.	Subject	Page
		- ago		<u> </u>	rage
			market and a		
1.4.7	Compressors	135	1.7.2.1.2	Tail-Body	195
1.4.7.1	CASCADES	136	1.7.2.1.3	Jet Interference	195
1.4.8	Fans	137	1.7.2.2	SPECIFIC MISSILES	195
1.4.9	Turbines	138	1.7.3	Rotating Wing Aircraft	195
1.4.10	Boundary Layer	138	1.7.3.1	AUTOGIROS	195
1.5	PROPELLERS	140	1.7.3.2	HELICOPTERS	196
1.5.1	Theory	141	1.7.4	Seaplanes	198
1.5.2	Design Variables	144	1.7.4.1	GENERAL STUDIES	198
1.5.2.1	BLADE SECTIONS	145	1.7.4.2	SPECIFIC TYPES	199
1.5.2.2	SOLIDITY	147	1.7.5	Airships	200
1.5.2.3	PITCH DISTRIBUTION	149	1.7.6	Biplanes and Triplanes	202
1.5.2.4	BLADE PLANFORMS	151	1.8	STABILITY AND CONTROL	204
1.5.2.5	MACH NUMBER EFFECTS	152	1.8.1	Stability	204
1.5.2.6	PUSHER	153	1.8.1.1	STATIC	205
1.5.2.7	DUAL ROTATION	154	1.8.1.1.1	Longitudinal Static	
1.5.2.8	INTERFERENCE OF BODIES	155		Stability	206
1.5.2.9	PITCH AND YAW	158	1.8.1.1.2	Lateral Static	
1.5.2.10	DIAMETER	159		Stability	213
1.5.3	Designated Types	159	1.8.1.1.3	Directional Static	
1.5.4	Slipstream	160		Stability	218
1.5.6	Operating Conditions	163	1.8.1.2	DYNAMIC STABILITY	222
			1.8.1.2.1	Longitudinal Dynamic	
1.6	ROTORS	164		Stability	222
1.6.1	Theory	164	1.8.1.2.2	Lateral and Direc-	
1.6.2	Experimental Studies	165		tional Dynamic	
1.6.2.1	POWER-DRIVEN	165		Stability	225
1.6.2.2	AUTOROTATING	167	1.8.1.2.3	Damping Derivatives	229
1.7	ALDODAFT	100	1.8.2	Control	232
1.7	AIRCRAFT	168	1.8.2.1	LONGITUDINAL CONTROL	233
1.7.1	Airplanes	168	1.8.2.2	LATERAL CONTROL	240
1.7.1.1	COMPONENTS IN COMBINATIO		1.8.2.3	DIRECTIONAL CONTROL	250
1.7.1.1.1	Wing-Fuselage	170	1.8.2.4	AIRBRAKES	253
1.7.1.1.2	Wing-Nacelle	172	1.8.2.5	HINGE MOMENTS	254
1.7.1.1.3	Tail-Wing and Fuselage Propeller and Jet Inte		1.8.2.6	CONTROL - AUTOMATIC	262
1.7.1.1.4	ference	175	1.8.3	Spinning ,	262
1.7.1.1.5	External Stores	176	1.8.4	Stalling	266
1.7.1.2	SPECIFIC AIRPLANES	176	1.8.5	Flying Qualities	269
1.7.1.2	American	176	1.8.6	Mass and Gyroscopic	
	British	182		Problems	275
	French	185	1.9	LOADING	276
	German	187	1.9.1	Wings	276
	Italian	189	1.9.1.1	STEADY LOADS	278
	Miscellaneous Foreig		1.9.1.2	MANEUVERING LOADS	282
1.7.1.3	PERFORMANCE	190	1.9.1.3	GUST LOADS	283
1.7.2	Missiles	194	1.9.2	Tail Loads	286
1.7.2.1	COMPONENTS IN COMBINATIO		1.9.2.1	STEADY	286
1.7.2.1.1	Wing Body Combina-		1.9.2.2	MANEUVERING	287
	tions - Missiles	195	1.9.2.3	BUFFETING AND GUST	288
	11.001.700				

Subject			Subject		
No.	Subject	Page	No.	Subject	Page
NO.	- Gubject	rage		<u></u>	· ugo
			100		
1.9.3	Fuselage, Nacelles, and		3	PROPULSION	325
	Canopies	289	354		2007
1.9.4	Rotating Wings	291	3.1	COMPLETE SYSTEMS	326
1.9.5	Aeroelasticity	291	3.1.1	Reciprocating Engines	326
			3.1.1.1	SPARK-IGNITION ENGINES	328
1.10	VIBRATION AND FLUTTER	292	3.1.1.2	COMPRESSION-IGNITION	
1.10.1	Wings and Ailerons	292		(DIESEL) ENGINES	331
1.10.2	Tails	293	3.1.2	Reciprocating Engines	
1.10.2.1	ELEVATORS AND RUDDERS	294		with Turbines	334
1.10.2.2	TABS	294 294	3.1.2.1	TURBOSUPERCHARGED	
1.10.3	Bodies	294	1000	ENGINES	334
1.10.4	Propellers, Fans, and	2011	3.1.2.2	COMPOUND ENGINES	334
1 10 5	Compressors	294	3.1.2.3	GAS GENERATOR-TURBINE	000
1.10.5	Rotating Wing Aircraft	295	345.4.5.6	ENGINES	336
1.11	PARACHUTES	296	3.1.3	Turbo-Jet Engines	336
TRY	and the standard of the standa	11.57	3.1.4	Turbo-Propeller Engines	337
2	HYDRODYNAMICS	297	3.1.5	Ducted Propeller Engines	337
-	TI DI OD TRAFITOO	5 % 1	3.1.6	Pulse Jet	337
2.1	THEORY	298	3.1.7	Ram Jet	338
			3.1.8	Rockets	338
2.2	GENERAL ARRANGEMENT STUDIES	300	3.1.9	Jet-Driven Rotors	339
			3.1.10	Comparison of Engine	
2.3	SEAPLANE HULL VARIABLES	302		Types	339
2.3.1	Length-Beam Ratio	302	3.1.11	Miscellaneous Engines	339
2.3.2	Deadrise	303	3.2	CHARGING AND CONTROL OF	
2.3.3	Steps	304	0.2	ENGINES	341
2.3.4	Afterbody Shape	306	3.2.1	Reciprocating Engines	341
2.3.5	Forebody Shape	307	3.2.1.1	METERING AND CONTROL	341
2.3.6	Chines	309	7.2.1.1	PARAMETERS	345
			3.2.1.2	MIXTURE CONTROL	346
2.4	SPECIFIC SEAPLANES AND HULLS	311	3.2.1.3	FUEL SUPPLY SYSTEM	348
			3.2.1.4	IGNITION SYSTEMS	351
2.5	LATERAL STABILIZERS	314	3.2.2	Gas Turbine Engines	352
2.5.1	Wing-Tip Float	314	3.2.2.1	METERING AND CONTROL	002
			7.2.2.2	PARAMETERS	352
2.6	PLANING SURFACES	315	3.2.2.1	FUEL SUPPLY SYSTEMS	352
			3.2.3	Ram Jet and Pulse Jet	002
2.7	HYDROFOILS	316		Engines	353
			3.2.3.1	METERING AND CONTROL	
2.8	IMPACT LOADS	317	1 648 H-17	PARAMETERS	353
			3.2.4	Rockets	353
2.9	DITCHING CHARACTERISTICS	319	3.2.4.1	METERING AND CONTROL	050
1715 56	The state of the s		3 2 11 2	PARAMETERS-ROCKETS	353 353
2.10	STABILITY AND CONTROL	320	3.2.4.2	FUEL SUPPLY SYSTEMS	353
2.10.1	Longitudinal	320	3.3	AUXILIARY BOOSTER SYSTEMS	354
2.10.2	Lateral	322	3.3.1	Reciprocating Engines	354
2.10.3	Directional	322	3.3.2	Gas Turbines	354
			3.3.2.1	LIQUID INJECTION	354
2.11	SURFACE CRAFT	323	3.3.2.2	AFTERBURNING	354

Subject			Subject		
No.	Subject	Page	No.	Subject	Page
		rage	100	000)000	- age
3.4	FUELS	355	3.7.1.3	MIXED FLOW	383
3.4.1	Preparation	356	3.7.2	Cooling	383
3.4.2	Physical Properties	356	3.7.3	Stress and Vibration	
3.4.3		350			384
3.4.3	Relation to Engine Per- formance	358	3.7.4	Matching	384
3.4.3.1	RECIPROCATING ENGINES	360	3.8	FRICTION AND LUBRICATION	385
3.4.3.1.1	Spark-Ignition	360	3.8.1	Theory and Experiment	385
3.4.3.1.2	Compression-Ignition		3.8.1.1	HYDRODYNAMIC THEORY	385
	(Diesel)	364	3.8.1.2	CHEMISTRY OF LUBRICA-	
3.4.3.2	TURBINE ENGINES, RAM			TION	386
	JETS AND PULSE JETS	365	3.8.1.3	SURFACE CONDITIONS	387
3.4.3.3	ROCKETS (Includes Fuel		3.8.2	Sliding Contact Surfaces	388
	and Oxidant)	365	3.8.2.1	SLEEVE BEARINGS	388
			3.8.2.2	CYLINDER AND PISTON	
3.5	COMBUSTION	366		MECHANISMS	389
3.5.1	General Combustion		3.8.2.3	SLIPPER PLATE BEARINGS	390
	Research	366	3.8.3	Rolling Contact Surfaces	390
3.5.1.2	TURBULENT FLOW	368	3.8.3.1	ANTI-FRICTION BEARINGS	390
3.5.1.3	DETONATION	368	3.8.4	Sliding and Rolling	
3.5.1.4	EFFECTS OF FUEL ATOM-			Contact Surfaces	390
	IZATION	368	3.8.4.1	GEARS	390
3.5.1.6	IGNITION OF GASES	368	3.8.5	Lubricants	390
3.5.2	Effect of Engine		3.8.6	Lubrication Systems	391
	Operating Conditions		3.9	HEAT TRANSFER	392
	and Combustion Cham-				393
	ber Geometry	368	3.9.1	Theory	395
3.5.2.1	RECIPROCATING ENGINES	369		Heat Exchangers	398
3.5.2.1.1	Spark-Ignition	370	3.9.2.1	RADIATORS	
3.5.2.1.2	Compression-Ignition		3.9.2.2	INTERCOOLERS	399
	(Diesel)	373	3.9.2.3	AFTERCOOLERS	399 399
3.5.2.2	TURBINE ENGINES	374	3.9.2.4	REGENERATORS OIL COOLERS	400
3.5.2.3	RAM-JET	374	3.9.2.5	OIL COOLERS	400
3.5.2.4	PULSE JET	375	3.10	COOLING	401
3.5.2.5	ROCKETS	375	3.10.1	Reciprocating Engines	401
3.6	COMPRESSORS	376	3:10.1.1	LIQUID COOLED	403
3.6.1	Flow Theory and Experi-	370	3.10.1.2	AIR COOLED	404
3.0.1	ment ment	376	3.10.2	Gas Turbine Systems	409
3.6.1.1	AXIAL FLOW	376			
3.6.1.2	RADIAL FLOW	378	3.11	PROPERTIES OF GASES	410
3.6.1.3	MIXED FLOW	379			
3.6.1.4	POSITIVE DISPLACEMENT	380	4	STRUCTURES	411
3.6.2	Stress and Vibration	380			
3.6.3	Matching	381	4.1	COLUMNS	412
			4.1.1	Tubular	412
3.7	TURBINES	382	4.1.2	Beam	412
3.7.1	Flow Theory and Experi-		4.1.3	Sections	413
	ment	382			
3.7.1.1	AXIAL FLOW	382	4.2	FRAMES, GRIDWORKS, AND	
3.7.1.2	RADIAL FLOW	383		TRUSSES	416

Subject		1	Subject		
No.	Subject	Page	No.	Subject	Page
	<u> </u>	90		-	
4.3	PLATES	419	5.1.9	Protective Coatings	488
4.3.1	Flat	419	5.1.10	Fabrics	489
4.3.1.1	UNSTIFFENED	419	5.1.11	Sandwich and Laminates	490
4.3.1.2	STIFFENED	422	5.1.12	Miscellaneous Types	491
4.3.2	Curved	425	5.2	PROPERTIES	493
4.3.2.1	UNSTIFFENED	425	5.2.1	Tensile	496
4.3.2.2	STIFFENED	425	5.2.2	Compressive	499
			5.2.2		501
4.4	BEAMS	427	5.2.4	Creep Stress-Rupture	502
4.4.1	Box	429	5.2.4		503
4.4.2	Diagonal Tension	431	5.2.5	Fatigue Shear	505
		11.		Flexural	505
4.5	SHELLS	432	5.2.7 5.2.8	Corrosion Resistance	505
4.5.1	Cylinders	432			
4.5.1:1	CIRCULAR	432	5.2.9	Structure Effects of Nuclear	506
4.5.1.2	ELLIPTICAL	435	5.2.10		506
4.5.2	Boxes	435		Radiation	500
			5.3	OPERATING STRESSES AND	
4.6	CONNECTIONS	437		CONDITIONS	507
4.6.1	Bolted	437	5.3.1	Airframe	508
4.6.2	Riveted	437	5.3.2	Propulsion System	508
4.6.3	Welded	440	0.0.2		
4.6.4	Bonded	442	6	METEOROLOGY	511
4.7	LOADS AND STRESSES	443	6.1	ATMOSPHERE	512
4.7.1	Tension	444	6.1.1	Standard Atmosphere	512
4.7.2	Compression	445	6.1.2	Atmospheric Gusts	513
4.7.3	Bending	453	6.1.2.1	STRUCTURE	513
4.7.4	Torsion	457	6.1.2.2	FREQUENCY	514
4.7.5	Shear	460	6.1.2.3	TURBULENCE	514
4.7.6	Concentrated	464	6.1.2.4	ALLEVIATION	516
4.7.7	Dynamic	465	6.1.3	Electricity	517
4.7.7.1	REPEATED DYNAMIC	467			
4.7.7.2	TRANSIENT DYNAMIC	467	6.2	ICE FORMATION	518
4.7.8	Normal Pressures	467			
			7	OPERATING PROBLEMS	521
4.8	WEIGHT ANALYSIS	469			
			7.1	SAFETY	522
5	MATERIALS	471			
			7.2	NAVIGATION	527
5.1	TYPES	472			
5.1.1	Aluminum	472	7.3	ICE PREVENTION AND REMOVAL	528
5.1.2	Magnesium	480	7.3.1	Engine Induction	
5.1.3	Steels	481		Systems	530
5.1.4	Heat-Resisting Alloys	483	7.3.2	Propellers	531
5.1.5	Ceramics	485	7.3.3	Wings and Tails	532
5.1.6	Plastics	485	7.3.4	Windshields	533
5.1.7	Woods	487	7.3.5	Miscellaneous Accessories	533
5.1.8	Adhesives	488	7.3.6	Propulsion Systems	534

Subject No.	Subject	Page	Subject No.	Subject	Page
7.4	NOISE	535	9.1.1	Wind Tunnels	563
		Col. 1827	9.1.2	Free-Flight	566
7.5	HEATING AND VENTILATING	536	9.1.3	Towing Tanks and Impact	
		81		Basins	568
7.6	LIGHTNING HAZARDS	538	9.1.4	Propulsion Research	
404				Equipment	569
7.7	PILOTING TECHNIQUES	539	9.1.5	Propeller	571
-			9.1.6	Materials	571
7.8	PHYSIOLOGICAL	541	9.1.7	Structures	572
7.0	0545044				
7.9	GENERAL	542	9.2	TECHNIQUE	574
7			9.2.1	Corrections	575
8	INSTRUMENTS	545	9.2.2	Aerodynamics	578
			9.2.3	Hydrodynamics	583
8.1	FLIGHT	546	9.2.4	Structures and Materials	584
			9.2.5	Propulsion	586
8.2	LABORATORY	552	9.2.6	Operating Problems	588
8.3	METEOROLOGICAL	558	10	NOMENCLATURE	589
		144.0		HOLLIGERIONE	000
9	RESEARCH EQUIPMENT AND	THE PARTY	1.1	DIDI IOODADUISO AND INDEVEO	
	TECHNIQUES	561	11	BIBLIOGRAPHIES AND INDEXES	589
9.1	EQUIPMENT	562	12	TECHNICAL SUMMARIES	590

AERODYNAMICS

(1)

Fundamental

(1.1)

- Ames, Joseph S.: Aerodynamic Coefficients and Transformation Tables. Rept. 20, 1918.
- Prandtl, L.: Recent Progress in the Theory of Air Flow as Applied to Aeronautics. TM 55, Jan. 1922.
- Munk, Max M.: Notes on Aerodynamic Forces - I. Rectilinear Motion. TN 104, July 1922.
- Munk, Max M.: Notes on Aerodynamic Forces - II. Curvilinear Motion. TN 105, July 1922.
- Munk, Max M.: Notes on Aerodynamic Forces - III. The Aerodynamic Forces on Airships. TN 106, July 1922.
- Burzio, Pilippo: Aerodynamics and Ballistics. TM 111, July 1922.
- Katzmayr, R.: Effect of Periodic Changes of Angle of Attack on Behavior of Airfoils. TM 147, Oct. 1922.
- Heisenberg, Werner: Absolute Dimensions of Karman Vortex Motion. TN 126, Jan. 1923.
- Knight, William; Prandtl, L.; von Karman, T.; Costanzi, G.; Margoulis, W.; Verduzio, R.; Katzmayr, Richard; Wolff, E. B. and Zahm, A. F.: Standardization and Aerodynamics. TN 134, March 1923.
- Prandtl, L.: The New Interpretation of the Laws of Air Resistance. TM 198, April 1923.
- Magnan, Dr.: Bird Flight. TM 220, Aug. 1923.
- Sayers, W. H.: Vorticism in Aeronautics. TM 222, Aug. 1923.
- Toussaint, A.: Lecture on Aerodynamics. TM 227, Sept. 1923.
- Bacon, D. L. and Reid, E. G.: The Resistance of Spheres in Wind Tunnels and in Air. Rept. 185, 1924.
- Munk, Max M.: Note on Vortices and on Their Relation to the Lift of Airfoils. TN 184, March 1924.
- Munk, Max M.: Remarks on the Pressure Distribution over the Surface of an Ellipsoid, Moving Translationally Through a Perfect Fluid. TN 196, June 1924.

- Munk, Max M.: The Velocity Distribution Caused by an Airplane at the Points of a Vertical Plane Containing the Span. TN 216, March 1925.
- Betz, A.: The "Magnus Effect," the Principle of the Flettner Rotor. TM 310, April 1925.
- Fick, Roderich: Relation of "Lilienthal Effect" to Dynamic Soaring Flight. TM 324, July 1925.
- Lippisch, Alexander: Tneory of Flapping Flight. TM 334, Oct. 1925.
- Blumenthal, Otto: Pressure Distribution On Joukowski Wings. TM 336, Oct. 1925.
- Zahm, A. F.: Flow and Drag Formulas for Simple Quadrics. Rept. 253, 1927.
- Prandtl, L.: Motion of Fluids with Very Little Viscosity. TM 452, March 1928.
- Burgers, J. M.: Note on Research Work by Helmholtz and Wien Relating to the Form of Waves Propagated Along the Surface of Separation of Two Liquids. TM 455, March 1928.
- Schrenk, Oskar: Experiments with a Wing Model from which the Boundary Layer is Removed by Suction. TM 534, Oct. 1929.
- Schrenk, Oskar: The Boundary Layer as a Means of Controlling the Flow of Liquids and Gases. TM 555, March 1930.
- Ahlborn, F.: The Magnus Effect in Theory and in Reality. TM 567, May 1930.
- Repenthin, Walter: Investigation of the Variations in the Velocity of the Air Flow About a Wing Profile. TM 575, July 1930.
- Betz, A.: The Vortex Theory and Its Significance in Aviation; Part I. Vortex Theory and Part II. Wing Theory. TM 576, July 1930.
- Hansen, M.: Velocity Distribution in the Boundary Layer of a Submerged Plate. TM 585, Oct. 1930.
- Tollmien, W.: The Production of Turbulence. TM 609, March 1931.
- v. Kármán, Th.: Mechanical Similitude and Turbulence. TM 611, March 1931.

- Prandtl, L.: Effect of Stabilizing Forces on Turbulence. TM 625, June 1931.
- Lagally, M.: The Frictionless Flow in the Region Around Two Circles. TM 626, June 1931.
- Tonnies, E.: Effect of the Ground on an Airplane Flying Close to It. TM 674, June 1932.
- Lotz, I.: Calculation of Potential Flow Past Airship Bodies in Yaw. TM 675, July 1932.
- Cuno, Otto: Experimental Determination of the Thickness of the Boundary Layer Along a Wing Section. TM 679, Aug. 1932.
- Krisam, Dr. F.: Speed and Pressure Recording in Three-Dimensional Flow. TM 688, Oct. 1932.
- Gruschwitz, E.: The Process of Separation in the Turbulent Friction Layer. TM 699, Feb. 1933.
- Schiller, L. and Linke, W.: Pressure and Frictional Resistance of a Cylinder at Reynolds Numbers 5,000 to 40,000. TM 715, July 1933.
- Prandtl, L.: Recent Results of Turbulence Research. TM 720, Aug. 1933.
- Betz, A.: Modification of Wing-Section Shape to Assure a Predetermined Change in Pressure Distribution. TM 767, March 1935.
- Muttray, H.: The Interdependence of Profile Drag and Lift with Joukowski Type and Related Airfoils. TM 768, March 1935.
- Hoerner, S.: Tests of Spheres with Reference to Reynolds Number, Turbulence, and Surface Roughness. TM 777, Oct. 1935.
- Schmidbauer, Hans: Behavior of Turbulent Boundary Layers on Curved Convex Walls. TM 791, April 1936.
- Tollmien, W.: General Instability Criterion of Laminar Velocity Distributions. TM 792, April 1936.
- Stuper, J.: Contribution to the Problem of Airfoils Spanning a Free Jet. TM 796, June 1936.
- Ferrari, C.: The Transport of Vorticity Through Fluids in Turbulent Motion (in the light of the Prandtl and Taylor theories). TM 799, July 1936.
- rediaevsky, K.: Turbulent Boundary Layer of an Airfoil. TM 822, April 1937.

- Garrick, I. E.: On Some Reciprocal Relations in the Theory of Nonstationary Flows. Rept. 629, 1938.
- von Doenhoff, Albert E.: A Method of Rapidly Estimating the Position of the Laminar Separation Point. TN 671, Oct. 1938.
- Gebelein, H.: Theory of Two-Dimensional Potential Flow About Arbitrary Wing Sections. TM 886, Jan. 1939.
- Recant, Isidore G.: Wind-Tunnel Investigation of Ground Effect on Wings with Flaps. TN 705, May 1939.
- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. Part II. Flows with Momentum Discontinuities (Hydraulic Jumps). TM 935, March 1940.
- Jacobs, W.: Variation in Velocity Profile with Change in Surface Roughness of Boundary. TM 951, Sept. 1940.
- Prandtl, L.: Note on the Calculation of Boundary Layers. TM 959, Nov. 1940.
- Schrenk, O.: Boundary Layer Removal by Suction. TM 974, April 1941.
- Schultz-Grunow, F.: New Frictional Resistance Law for Smooth Plates. TM 986, Sept. 1941.
- v. Koppenfels, Werner: Two-Dimensional Potential Flow Past a Smooth Wall with Partly Constant Curvature. TM 996, Nov. 1941.
- Eckert, B. and Pfluger, F.: The Resistance Coefficient of Commercial Round Wire Grids. TM 1003, Jan. 1942.
- Wieghardt, K.: Correlation of Data on the Statistical Theory of Turbulence. TM 1008, March 1942.
- Pretsch, J.: The Stability of Laminar Flow Past a Sphere. TM 1017, June 1942.
- Reichardt, H.: Heat Transfer Through Turbulent Friction Layers. TM 1047, Sept. 1943.
- Frankl, F. and Voishel, V.: Turbulent Friction in the Boundary Layer of a Flat Plate in a Two-Dimensional Compressible Flow at High Speeds. TM 1053, Dec. 1943.
- Katzoff, S. and Finn, Robert S.: Note on the Interpretation of Wake-Survey Data and Its Use in the Estimation of Induced Drag Due To Irregularities. MR (WR L-639), Jan. 1944.

- Naiman, Irven: Numerical Evaluation of the ε-Integral Occurring in the Theodorsen Arbitrary Airfoil Potential Theory. ARR L4D27a (WR L-136), April 1944.
- Loitsianskii, L. G.: Integral Methods in the Theory of the Boundary Layer. TM 1070, July 1944.
- Theodorsen, Theodore: Airfoil-Contour Modifications Based on ε-Curve Method of Calculating Pressure Distribution. ARR L4G05 (WR L-135), July 1944.
- Swanson, Robert S. and Gillis, Clarence L.: Wind-Tunnel Calibration and Correction Procedures for Three-Dimensional Models. ARR L4E31 (WR L-1), Oct, 1944.
- Mutterperl, William: The Conformal Transformation of an Airfoil into a Straight Line and its Application to the Inverse Problem of Airfoil Theory. ARR L4K22a (WR L-113), Dec. 1944.
- Mutterperl, William: A Solution of the Direct and Inverse Potential Problems for Arbitrary Cascades of Airfoils. ARR L4K22b (WR L-81), Dec. 1944.
- Swanson, Robert S. and Crandall, Stewart M.: An Electromagnetic-Analogy Method of Solving Lifting-Surface-Theory Problems. ARR L5D23 (WR L-120), May 1945.
- Naiman, Irven: Numerical Evaluation by Harmonic Analysis of the ϵ -Function of the Theodorsen Arbitrary-Airfoil Potential Theory. ARR L5H18 (WR L-153), Sept. 1945.
- Tollmien, Walter: Calculation of Turbulent Expansion Processes. TM 1085, Sept. 1945.
- Loitsianskii, L. G.: Some Basic Laws of Isotropic Turbulent Flow. TM 1079, Oct. 1945.
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.
- Gray, V. H. and Campbell, R. G.: A Method for Estimating Heat Requirements for Ice Prevention on Gas-Heated Hollow Propeller Blades. TN 1494, Dec. 1947.
- Heaslet, Max. A. and Lomax, Harvard: The Use of Source-Sink and Doublet Distributions Extended to the Solution of Arbitrary Boundary Value Problems in Supersonic Flow. TN 1515, Jan. 1948.

- Donaldson, Coleman duP.: Note on the Importance of Imperfect-Gas Effects and Variation of Heat Capacities on the Isentropic Flow of Gases. RM L8J14. Dec. 1948.
- Moeckel, W. E.: Use of Characteristic Surfaces for Unsymmetrical Supersonic Flow Problems. TN 1849, March 1949.
- Heaslet, Max. A. and Lomax, Harvard: The Application of Green's Theorem to the Solution of Boundary-Value Problems in Linearized Supersonic Wing Theory. TN 1767, April 1949.
- Eggers, A. J., Jr.: One-Dimensional Flows of an Imperfect Diatomic Gas. TN 1861, April 1949.

INCOMPRESSIBLE FLOW

(1.1.1)

- Marchis, L.: Experimental Researches on the Resistance of Air. Rept. 12, 1916.
- Bateman, H.: Stability of the Parachute and Helicopter. Rept. 80, 1920.
- Prandtl, L.: Theory of Lifting Surfaces. Part II. TN 10, Aug. 1920.
- Munk, Max M.: Some New Aerodynamical Relations. Rept. 114, 1921.
- von Mises, R.: Lift Theory of Supporting Surfaces. Second Article. TM 41, 1921.
- Betz, A.: Vortices and the Related Principles of Hydrodynamics. TN 68, Nov. 1921.
- Zahm, A. F.: Influence of Model Surface and Air Flow Texture on Resistance of Aerodynamic Bodies. Rept. 139, 1922.
- Munk, Max M.: General Theory of Thin Wing Sections. Rept. 142, 1922.
- Bateman, H.: The Decay of a Simple Eddy. Rept. 144, 1922.
- Munk, Max M.: General Biplane Theory. Rept. 151, 1922.
- Bateman, H.: The Inertia Coefficients of an Airship in a Frictionless Fluid. Rept. 164, 1923.
- Tuckerman, L. B.: Notes on Aerodynamic Forces on Airship Hulls. TN 129, March 1923.
- Munk, Max M.: Some Tables of the Facto of Apparent Additional Mass. TN 197 July 1924.

Incompressible Flow (Cont.)

- Munk, Max M.: The Simplifying Assumptions, Reducing the Strict Application of Classical Hydrodynamics to Practical Aeronautical Computations. TN 207, Nov. 1924.
- Tuckerman, L.B.: Inertia Factors of Ellipsoids for Use in Airship Design. Rept. 210, 1925.
- Rizzo, Frank: The Flettner Rotor Ship in the Light of the Kutta-Joukowski Theory and of Experimental Results. TN 228, Oct. 1925.
- Prandtl, L. and Tietjens, O.: Kinetographic Flow Pictures. TM 364, May 1926.
- Dupont, M.: Multiplicity of Solutions in Aerodynamics. TM 413, May 1927.
- Schrenk, O.: Systematic Investigation of Joukowsky Wing Sections. TM 422, July 1927.
- Flachsbart, O.: Recent Researches on the Air Resistance of Spheres. TM 475, Aug. 1928.
- Durand, W. F.: A Proof of the Theorem Regarding the Distribution of Lift over the Span for Minimum Induced Drag. Rept. 349, 1929.
- Zahm, A. F. and Louden, F. A.: Tables for Pressure of Air on Coming to Rest from Various Speeds. Rept. 316, 1929.
- Von Kármán, Théodor: Calculation of Pressure Distribution on Airship Hulls. TM 574, July 1930.
- Betz, A.: The Vortex Theory and Its Significance in Aviation. Part I. Vortex Theory. Part II. Wing Theory. TM 576, July 1930.
- Theodorsen, Theodore: On the Theory of Wing Sections with Particular Reference to the Lift Distribution. Rept. 383, 1931.
- Theodorsen, Theodore: Theory of Wing Sections of Arbitrary Shape. Rept. 411, 1931.
- Rhode, Richard V. and Pearson, Henry A.: A Method for Computing Leading-Edge Loads. Rept. 413, 1931.
- Theodorsen, T. and Garrick, I. E.: General Potential Theory of Arbitrary Wing Sections. Rept. 452, 1933.
- Garrick, I. E.: Determination of the Theoretical Pressure Distribution for Twenty Airfoils. Rept. 465, 1933.

- Betz, A.: Behavior of Vortex Systems. TM 713, June 1933.
- Dryden, Hugh L.: Computation of the Two-dimensional Flow in a Laminar Boundary Layer. Rept. 497, 1934.
- Betz, A.: Modification of Wing-Section Shape to Assure a Predetermined Change in Pressure Distribution. TM 767, March 1935.
- Pistolesi, E.: Ground Effect Theory and Practice. TM 828, June 1937.
- Gebelein, H.: Theory of Two-Dimensional Potential Flow About Arbitrary Wing Sections. TM 886, Jan. 1939.
- Reissner, Hans: A Generalized Vortex Theory of the Screw Propeller and Its Application. TN 750, Feb. 1940.
- Prandtl, L.: Recent Work on Airfoil Theory. TM 962, Dec. 1940.
- Schmieden, C.: Flow Around Wings Accompanied by Separation of Vortices. TM 961, Dec. 1940.
- Jones, Robert T. and Cohen, Doris: A Graphical Method of Determining Pressure Distribution in Two-Dimensional Flow. Rept. 722, 1941.
- Pistolesi, E.: On the Calculation of Flow Past an Infinite Screen of Thin Airfoils. TM 968, Feb. 1941.
- Corson, Blake W., Jr.: The Aerodynamics of a Wind-Tunnel Fan. TN 820, Aug. 1941.
- Knight, Montgomery and Hefner, Ralph A.: Analysis of Ground Effect on the Lifting Airscrew. TN 835, Dec. 1941.
- Kaplan, Carl: On a New Method for Calculating the Potential Flow Past a Body of Revolution. Rept. 752, 1942.
- Keune, F.: Two-Dimensional Potential Flow Past an Ordinary Thick Wing Profile. TM 1023, July 1942.
- Garrick, I. E.: On the Plane Potential Flow Past a Lattice of Arbitrary Airfoils. Rept. 788, 1944.
- Graham, Donald J.: Tunnel-Wall Corrections to Rolling and Yawing-Moments
 Due to Aileron Deflection in Closed
 Rectangular Wind Tunnels. ARR 4F21
 (WR A-14), Jan. 1945.
- Bers, Lipman: On a Method of Constructing Two-Dimensional Subsonic Compressible Flows Around Closed Profiles. TN 969, March 1945.

Incompressible Flow (Cont.)

- Gardner, Clifford S. and LaHatte, James A., Jr.: Determination of Induced Velocity in Front of an Inclined Propeller by a Magnetic-Analogy Method. ARR L6A05b (WR L-154), Feb. 1946.
- Reissner, Eric: Effect of Finite Span on the Airload Distributions for Oscillating Wings. I - Aerodynamic Theory of Oscillating Wings of Finite Span. TN 1194, March 1947.
- Watkins, Charles E.: The Streamline Pattern in the Vicinity of an Oblique Airfoil. TN 1231, March 1947.
- Katzoff, S.; Finn, Robert S. and Laurence, James C.: Interference Method for Obtaining the Potential Flow Past an Arbitrary Cascade of Airfoils. TN 1252, May 1947.
- Greenberg, J. Mayo: Some Considerations on an Airfoil in an Oscillating Stream. TN 1372, Aug. 1947.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.
- Moses, H. E.: Velocity Distributions on Arbitrary Airfoils in Closed Tunnels by Conformal Mapping. TN 1899, June 1949.

COMPRESSIBLE FLOW

(1.1.2)

- Zahm, A. F.: Theories of Flow Similitude. Rept. 287, 1928.
- Burgers, J. M.: Note on Research Work by Helmholtz and Wien Relating to the Form of Waves Propagated Along the Surface of Separation of Two Liquids. TM 455, March 1928.
- Stowell, E. Z. and Deming, A. F.: Vortex Noise from Rotating Cylindrical Rods. TN 519, Feb. 1935.
- von Doenhoff, Albert E.: An Application of the von Karman-Millikan Laminar Boundary-Layer Theory and Comparison with Experiment. TN 544, Oct. 1935.
- Stuper, J.: Reduction of Lift of a Wing Due to Its Drag. TM 781, Nov. 1935.
- Jacobs, Eastman N.: Methods Employed in America for the Experimental Investigation of Aerodynamic Phenomena at High Speeds. MP 42, March 1936.

- Lindsey, W. F.: Drag of Cylinders of Simple Shapes. Rept. 619, 1938.
- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. Part II. Flows with Momentum Discontinuities (Hydraulic Jumps). TM 935, March 1940.
- Kaplan, Carl: The Flow of a Compressible Fluid Past a Sphere. TN 762, May 1940.
- Prandtl, L.: Recent Work on Airfoil Theory. TM 962, Dec. 1940.
- Frankl, F.: Heat Transfer in the Turbulent Boundary Layer of a Compressible Gas at High Speeds; and Frankl, F. and Voishel, V.: Friction in the Turbulent Boundary Layer of a Compressible Gas at High Speeds. TM 1032, Oct. 1942.
- Kaplan, Carl: The Flow of a Compressible Fluid Past a Curved Surface. Rept. 768, 1943.
- von Doenhoff, Albert E. and Tetervin, Neal: Determination of General Relations for the Behavior of Turbulent Boundary Layers. Rept. 772, 1943.
- Rhode, Richard V. and Pearson, H. A.:
 Observations of Compressibility Phenomena in Flight. ACR 3D15 (WR L-417), April 1943.
- Gelbart, Abe: On a Function-Theory Method for Obtaining Potential-Flow Patterns of a Compressible Fluid. ARR 3G27 (WR L-460), July 1943.
- Allen, H. Julian: Notes on the Effect of Surface Distortions on the Drag and Critical Mach Number of Airfoils. ACR 3129, Sept. 1943.
- Garrick, I. E. and Kaplan, Carl: On the Flow of a Compressible Fluid by the Hodograph Method. I - Unification and Extension of Present-Day Results. Rept. 789, 1944.
- Garrick, I. E. and Kaplan, Carl: On the Flow of a Compressible Fluid by the Hodograph Method. II - Fundamental Set of Particular Flow Solutions of the Chaplygin Differential Equation. Rept. 790, 1944.
- Theodorsen, Theodore and Regier, Arthur: Experiments on Drag of Revolving Disks, Cylinders and Streamline Rods at High Speeds. Rept. 793, 1944.
- Vedernikoff, A. N.: An Experimental Investigation of the Flow of Air in a Flat Broadening Channel. TM 1059, Jan. 1944.

- Compressible Flow (Cont.)
- Kantrowitz, Arthur: Effects of Heat-Capacity Lag in Gas Dynamics. ARR 4A22 (WR L-457), Jan. 1944.
- Kantrowitz, Arthur and Huber, Paul W.: Heat-Capacity Lag in Turbine-Working Fluids. ARR L4E29 (WR L-21), May 1944.
- Joyner, Upshur T.: Charts of Pressure, Density, and Temperature Changes at an Abrupt Increase in Cross-Sectional Area of Flow of Compressible Air. ARR L4L19 (WR L-13), Jan. 1945.
- Hicks, Bruce L.: Addition of Heat to a Compressible Fluid in Motion. ACR E5A29 (WR E-88), Feb. 1945.
- Gillis, Clarence L.; Polhamus, Edward C. and Gray, Joseph L., Jr.: Charts for Determining Jet-Boundary Corrections for Complete Models in 7- by 10-Foot Closed Rectangular Wind Tunnels. ARR L5G31 (WR L-123), Sept. 1945.
- Adler, Alfred A.: Variation with Mach Number of Static and Total Pressures Through Various Screens. CB L5F28 (WR L-23), Feb. 1946.
- Tetervin, Neal: Approximate Formulas for the Computation of Turbulent Boundary-Layer Momentum Thicknesses in Compressible Flows. ACR L6A22 (WR L-119), March 1946.
- Ribner, Herbert S.: Field of Flow About a Jet and Effect of Jets on Stability of Jet-Propelled Airplanes. ACR L6C13 (WR L-213), April 1946.
- Huber, Paul W.: Use of Freon-12 as a Fluid for Aerodynamic Testing. TN 1024, April 1946.
- Theodorsen, Theodore: Note on the Theorems of Bjerknes and Crocco. TN 1073, May 1946.
- Hess, Robert V. and Gardner, Clifford S.: Study by the Prandtl-Glauert Method of Compressibility Effects and Critical Mach Number for Ellipsoids of Various Aspect Ratios and Thickness Ratios. RM L7BO3a, March 1947.
- Bartnoff, Shepard and Gelbart, Abe: On Subsonic Compressible Flows by a Method of Correspondence. II - Application of Methods to Studies of Flow with Circulation About a Circular Cylinder. TN 1171, April 1947.
- Liepmann, Hans W. and Fila, Gertrude H.: Investigations of Effects of Surface Temperature and Single Roughness Elements on Boundary-Layer Transition. TN 1196, April 1947.

- Nekrasov, A. I.: Theory of Wings in Nonstationary Flow. TM 1154, June 1947.
- Ringleb, F.: Some Aerodynamic Relations for an Airfoil in Oblique Flow. TM 1158, June 1947.
- Hicks, Bruce L.; Montgomery, Donald J. and Wasserman, Robert W.: The One-Dimensional Theory of Steady Compressible Fluid Flow in Ducts with Friction and Heat Addition. TN 1336, July 1947.
- Lees, Lester: The Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1360, July 1947.
- Sedov, L. I.: On the Theory of the Unsteady Motion of an Airfoil. TM 1156, July 1947.
- Ludwieg, H.: Drag Corrections in High-Speed Wind Tunnels. TM 1163, July 1947.
- Spurr, Robert A. and Allen, H. Julian: A Theory of Unstaggered Airfoil Cascades in Compressible Flow. RM A7E29, Sept. 1947.
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.
- Turner, L. Richard; Addie, Albert N. and Zimmerman, Richard H.: Charts for the Analysis of One-Dimensional Steady Compressible Flow. TN 1419, Jan. 1948.
- 1419, Jan. 1948. Kuo Yung-Huai: Two-Dimensional Irrotational Transonic Flows of a Compressible Fluid. TN 1445, June 1948.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.
- Spreiter, John R.: Aerodynamic Properties of Slender Wing-Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1662, July 1948.
- Valerino, Michael F.: Generalized Charts for Determination of Pressure Drop of a High-Speed Compressible Fluid in Heat-Exchanger Passages. I - Air Heated in Smooth Passages of Constant Area with Constant Wall Temperature. RM E8G23, Oct. 1948.
- Huckel, Vera: Tables of Hypergeometric Functions for Use in Compressible-Flow Theory. TN 1716, Oct. 1948.

- Compressible Flow (Cont.)
- Tetervin, Neal: Remarks Concerning the Behavior of the Laminar Boundary Layer in Compressible Flows. TN 1805, Jan. 1949.
- Chapman, Dean R.: Laminar Mixing of a Compressible Fluid. TN 1800, Feb. 1949.
- Gothert, B. and Kawalki, K. H.: The Compressible Flow Past Various Plane Profiles near Sonic Velocity. TM 1203, March 1949.
- Pfeiffer, F. and Meyer-König, W.: The Characteristics Method Applied to Stationary Two-Dimensional and Rotationally Symmetrical Gas Flows. TM 1211, March 1949.
- Heaslet, Max. A.; Lomax, Harvard and Spreiter, John R.: Linearized Compressible-Flow Theory for Sonic Flight Speeds. TN 1824, March 1949.
- Heaslet, Max. A. and Lomax, Harvard: The Application of Green's Theorem to the Solution of Boundary-Value Problems in Linearized Supersonic Wing Theory. TN 1767, April 1949.
- Huber, Paul W.; Fitton, Cliff E., Jr. and Delpino, F.: Experimental Investigation of Moving Pressure Disturbances and Shock Waves and Correlation with One-Dimensional Unsteady-Flow Theory. TN 1903, July 1949.
- Williams, Thomas W. and Benson, James M.: Preliminary Investigation of the Use of Afterglow for Visualizing Low-Density Compressible Flows. TN 1900, June 1949.
- Alpert, Sumner: Design Method for Two-Dimensional Channels for Compressible Flow with Application to High-Solidity Cascades. TN 1931, Aug. 1949.

SUBSONIC FLOW (1.1.2.1)

- Riabouchinski, D.: On the Resistance of the Air at High Speeds and on the Automatic Rotation of Projectiles. TN 49, April 1921.
- Briggs, L. J.; Hull, G. F. and Dryden, H. L.: Aerodynamic Characteristics of Airfoils at High Speeds. Rept. 207, 1925.
- Zahm, A. F.: Pressure of Air on Coming to Rest from Various Speeds. Rept. 247, 1926.

- Briggs, L. J. and Dryden, H. L.: Pressure Distribution over Airfoils at High Speeds. Rept. 255, 1927.
- Zahm, A. F. and Louden, F. A.: Tables for Pressure of Air on Coming to Rest from Various Speeds. Rept. 316, 1929.
- Von Karmán, Theodor: Calculation of Pressure Distribution on Airship Hulls. TM 574, July 1930.
- Stack, John: The Compressibility Burble. TN 543, Oct. 1935.
- Prandtl, L.: General Considerations on the Flow of Compressible Fluids. TM 805, Oct. 1936.
- Kaplan, Carl: Compressible Flow About Symmetrical Joukowski Profiles. Rept. 621, 1938.
- Kaplan, Carl: Two-Dimensional Subsonic Compressible Flow Past Elliptic Cylinders. Rept. 624, 1938.
- Stack, John; Lindsey, W. F. and Littell, Robert E.: The Compressibility Burble and the Effect of Compressibility on Pressures and Forces Acting on an Airfoil. Rept. 646, 1938.
- Frössel, W.: Flow in Smooth Straight Pipes at Velocities Above and Below Sound Velocity. TM 844, Jan. 1938.
- Kaplan, Carl: A Theoretical Study of the Moment on a Body in a Compressible Fluid. Rept. 671, 1939.
- Silverstein, Abe and Joyner, Upshur T.: Experimental Verification of the Theory of Oscillating Airfoils. Rept. 673, 1939.
- Ferri, Antonio: Investigations and Experiments in the Guidonia Supersonic Wind Tunnel. TM 901, July 1939.
- Walchner, O.: The Effect of Compressibility on the Pressure Reading of a Prandtl Pitot Tube at Subsonic Flow Velocity. TM 917, Nov. 1939.
- Becker, John V.: Boundary-Layer Transition on the N.A.C.A. 0012 and 23012
 Airfoils in the 8-foot High-Speed Wind Tunnel. ACR (WR L-682), Jan. 1940.
- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. Part I. Flows with No Energy Dissipation. TM 934, March 1940.

- Subsonic Flow Compressible (Cont.)
- Anon: Standards for Discharge Measurement with Standardized Nozzles and Orifices. German Industrial Standard 1952. TM 952, Sept. 1940.
- Jones, Robert T.: Correction of the Lifting-Line Theory for the Effect of the Chord. TN 817, July 1941.
- Stack, John: Compressibility Effects in Aeronautical Engineering. ACR, Aug. 1941.
- Lamla, Ernst: On the Symmetrical Potential Flow of Compressible Fluid Past a Circular Cylinder in the Tunnel in the Subcritical Zone. TM 1018, June 1942.
- Hensley, Reece V.: Calibrations of Pitot-Static Tubes at High Speeds. ACR (WR L-396), July 1942.
- Thompson, F. L. and Zalovcik, John A.: Airspeed Measurements in Flight at High Speeds. ARR, Oct. 1942.
- Hantzsche, W. and Wendt, H.: The Compressible Potential Flow Past Elliptic Symmetrical Cylinders at Zero Angle of Attack and with No Circulation. TM 1030, Oct. 1942.
- Kaplan, Carl: On the Use of Residue Theory for Treating the Subsonic Flow of a Compressible Fluid. Rept. 728, 1942.
- Davis, Wallace F.: Comparison of Various Methods for Computing Drag from Wake Surveys. ARR (WR W-4), Jan. 1943.
- Stack, John; Fedziuk, Henry A. and Cleary, Harold E.: Preliminary Investigation of the Effect of Compressibility on the Maximum Lift Coefficient. ACR, Feb. 1943.
- Keenan, Joseph H. and Neumann, Ernest P.: Measurements of Friction Coefficients in a Pipe for Subsonic and Supersonic Flow of Air. ARR 3G13 (WR L-44), July 1943.
- Heaslet, Max A.: Compressible Potential Flow with Circulation About a Circular Cylinder. Rept. 780, 1944.
- Allen, H. Julian and Vincenti, Walter G.: Wall Interference in a Two-Dimensional-Flow Wind Tunnel, with Consideration of the Effect of Compressibility. Rept. 782, 1944.
- Kaplan, Carl: The Flow of a Compressible Fluid Past a Circular Arc Profile. Rept. 794, 1944.

- Nielsen, Jack N.: Compressibility Effects on Heat Transfer and Pressure Drop in Smooth Cylindrical Tubes. ARR L4C16 (WR L-179), March 1944.
- Emmons, Howard W.: The Numerical Solution of Compressible Fluid Flow Problems. TN 932, May 1944.
- Reissner, Eric: On the General Theory of Thin Airfoils for Nonuniform Motion. TN 946, Aug. 1944.
- Byrne, Robert W.: Experimental Constriction Effects in High-Speed Wind Tunnels. ACR L4L07a (WR L-74), Dec. 1944.
- Bers, Lipman: On a Method of Constructing Two-Dimensional Subsonic Compressible Flows Around Closed Profiles. TN 969, March 1945.
- Nielsen, Jack N. and Sweberg, Harold H.: Note on Compressibility Effects on Downwash at the Tail at Subcritical Speeds. CB L5C09 (WR L-19), March 1945.
- Heaslet, Max A.: Theoretical Investigation of Methods for Computing Drag from Wake Surveys at High Subsonic Speeds. ARR 5C21 (WR W-1), June 1945.
- Bers, Lipman: On the Circulatory Subsonic Flow of a Compressible Fluid Past a Circular Cylinder. TN 970, July 1945.
- Bergman, Stefan: Graphical and Analytical Methods for the Determination of a Flow of a Compressible Fluid Around an Obstacle. TN 973, July 1945.
- Bergman, Stefan: On Two-Dimensional Flows of Compressible Fluids. TN 972, Aug. 1945.
- Kaplan, Carl: Effect of Compressibility at High Subsonic Velocities on the Lifting Force Acting on an Elliptic Cylinder. Rept. 834, 1946.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.
- Vincenti, Walter G. and Graham, Donald J.: The Effect of Wall Interference upon the Aerodynamic Characteristics of an Airfoil Spanning a Closed Throat Circular Wind Tunnel. Rept. 849, 1946.
- Bers, Lipman: Velocity Distribution on Wing Sections of Arbitrary Shape in Compressible Potential Flow. I -Symmetric Flows Obeying the Simplified Density-Speed Relation. TN 1006, April 1946.

- Subsonic Flow Compressible (Cont.)
- Bers, Lipman: Velocity Distribution on Wing Sections of Arbitrary Shape in Compressible Potential Flow. II -Subsonic Symmetric Adiabatic Flows. TN 1012, June 1946.
- Bergman, Stefan: Methods for Determination and Computation of Flow Patterns of a Compressible Fluid. TN 1018, Sept. 1946.
- Lees, Lester: A Discussion of the Application of the Prandtl-Glauert Method to Subsonic Compressible Flow over a Slender Body of Revolution. TN 1127, Sept. 1946.
- Gothert, B.: Plane and Three-Dimensional Flow at High Subsonic Speeds. TM 1105, Oct. 1946.
- Bergman, Stefan: On Supersonic and Partially Supersonic Flows. TN 1096, Dec. 1946.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Lippisch, A. and Beuschausen, W.: Pressure Distribution Measurements at High Speed and Oblique Incidence of Flow. TM 1115, March 1947.
- Gelbart, Abe: On Subsonic Compressible
 Flows by a Method of Correspondence.
 I Methods for Obtaining Subsonic
 Circulatory Compressible Flows About
 Two-Dimensional Bodies. TN 1170,
 March 1947.
- Kaplan, Carl: Effect of Compressibility at High Subsonic Velocities on the Moment Acting on an Elliptic Cylinder. TN 1218, March 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Smith, Newell H.: Exploratory Investigation of Laminar-Boundary-Layer Oscillations on a Rotating Disk. TN 1227, May 1947.
- Brown, W. Byron: Friction Coefficients in a Vaneless Diffuser. TN 1311, May 1947.
- Greenberg, J. Mayo: Airfoil in Sinusoidal Motion in a Pulsating Stream. TN 1326, June 1947.
- Perl, W.: Calculation of Compressible Flows Past Aerodynamic Shapes by Use of the Streamline Curvature. TN 1328, June 1947.

- Jones, Robert T.: Subsonic Flow over Thin Oblique Airfoils at Zero Lift. TN 1340, June 1947.
- Bilharz, Herbert and Holder, Ernst: Calculation of the Pressure Distribution on Bodies of Revolution in the Subsonic Flow of a Gas. Part I Axially Symmetrical Flow. TM 1153, July 1947.
- Herriot, John G.: The Linear Perturbation Theory of Axially Symmetric Compressible Flow with Application to the Effect of Compressibility on the Surface of a Body of Revolution. RMA 6H19, July 1947.
- Kaplan, Carl: On Similarity Rules for Transonic Flows. TN 1527, Jan. 1948.
- Oswatitsch, K. and Wieghardt, K.: Theoretical Analysis of Stationary Potential Flows and Boundary Layers at High Speed. TM 1189, April 1948.
- Gothert, B.: Comparison of Drop and Wind-Tunnel Experiments on Bomb Drag at High Subsonic Speeds. TM 1186, May 1948.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow past Thick Airfoil Sections. TN 1657, July 1948.
- Burcher, Marie A.: Compressible Flow Tables for Air. TN 1592, Aug. 1948.
- Murray, Harry E.: Comparison with Experiment of Several Methods of Predicting the Lift of Wings in Subsonic Compressible Flow. TN 1739, Oct. 1948.
- Emmons, Howard W.: Flow of a Compressible Fluid past a Symmetrical Airfoil in a Wind Tunnel and in Free Air. TN 1746, Nov. 1948.
- Hess, Robert V. and Gardner, Clifford S.:
 Study by the Prandtl-Glauert Method of
 Compressibility Effects and Critical
 Mach Number for Ellipsoids of Various Aspect Ratios and Thickness
 Ratios. TN 1792, Jan. 1949.
- Nitzberg, Gerald E. and Crandall, Stewart:
 A Study of Flow Changes Associated
 with Airfoil Section Drag Rise at Supercritical Speeds. TN 1813, Feb. 1949.
- Reissner, Eric: On Compressibility Corrections for Subsonic Flow over Bodies of Revolution. TN 1815, Feb. 1949.

- Supersonic Flow Compressible (Cont.)
- Gothert, B. and Kawalki, K. H.: The Compressible Flow past Various Plane Profiles near Sonic Velocity. TM 1203, March 1949.
- Oswatitsch, Kl. and Rothstein, W.: Flow Pattern in a Converging-Diverging Nozzle. TM 1215, March 1949.
- Huppert, M. C. and MacGregor, Charles: Comparison Between Predicted and Observed Performance of Gas-Turbine Stator Blade Designed for Free-Vortex Flow. TN 1810, April 1949.
- Hess, Robert V.: Study of Unsteady Flow Disturbances of Large and Small Amplitudes Moving Through Supersonic or Subsonic Steady Flows. TN 1878, May 1949.
- Daley, Bernard N. and Hanna, Lillian E.: Subsonic Two-Dimensional-Flow Conditions near an Airfoil Determined by Static Pressures Measured at the Tunnel Wall. TN 1873, April 1949.
- Schmieden, C. and Kawalki, K. H.: Contribution to the Problem of Flow at High Speed. TM 1233, June 1949.
- Costello, George R.: Method of Designing Airfoils with Prescribed Velocity Distributions in Compressible Potential Flows. TN 1913, Aug. 1949.
- Zobel, Th.: Flow Measurement by Means of Light Interferences. TM 1253, Aug. 1949.

MIXED FLOW (1.1.2.2)

- Riabouchinski, D.: On the Resistance of the Air at High Speeds and on the Automatic Rotation of Projectiles. TN 49, April 1921.
- Briggs, L. J. and Dryden, H. L.: Pressure Distribution over Airfoils at High Speeds. Rept. 255, 1927.
- Prandtl, L.: General Considerations on the Flow of Compressible Fluids. TM 805, Oct. 1936.
- Frössel, W.: Flow in Smooth Straight Pipes at Velocities Above and Below Sound Velocity. TM 844, Jan. 1938.
- Ferri, Antonio: Investigations and Experiments in the Guidonia Supersonic Wind Tunnel. TM 901, July 1939.

- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. Part I. Flows with No Energy Dissipation. TM 934, March 1940.
- Stack, John: Compressibility Effects in Aeronautical Engineering. ACR, Aug. 1941.
- Emmons, Howard W.: The Numerical Solution of Compressible Fluid Flow Problems. TN 932, May 1944.
- Rhode, Richard V.: Correlation of Flight Data on Limit Pressure Coefficients and Their Relation to High-Speed Burbling and Critical Tail Loads. ACR L4I27 (WR L-269), Sept. 1944.
- Tsien, Hsue-Shen: The "Limiting Line" in Mixed Subsonic and Supersonic Flow of Compressible Fluids. TN 961, Nov. 1944.
- Wood, Clotaire and Zalovcik, John A.:
 Flight Investigation at High Speeds of
 Flow Conditions over an Airplane Wing
 as Indicated by Surface Tufts. CB
 L5E22 (WR L-91), May 1945.
- Bergman, Stefan: On Two-Dimensional Flows of Compressible Fluids. TN 972, Aug. 1945.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.
- Theodorsen, Theodore: Extension of the Chaplygin Proofs on the Existence of Compressible-Flow Solutions to the Supersonic Region. TN 1028, March 1946.
- Theodorsen, Theodore: A Condition on the Initial Shock. TN 1029, March 1946.
- Tsien, Hsue-Shen and Kuo, Yung-Huai: Two-Dimensional Irrotational Mixed Subsonic and Supersonic Flow of a Compressible Fluid and the Upper Critical Mach Number. TN 995, May 1946.
- Emmons, Howard W.: The Theoretical Flow of a Frictionless, Adiabatic, Perfect Gas Inside of a Two-Dimensional Hyperbolic Nozzle. TN 1003, May 1946.
- Theodorsen, Theodore: Note on the Theorems of Bjerknes and Crocco. TN 1073. May 1946.
- Bergman, Stefan: On Supersonic and Partially Supersonic Flows. TN 1096, Dec. 1946.

- Mixed Flow Compressible (Cont.)
- Ackeret, J.; Feldmann, F. and Rott, N.: Investigations of Compression Shocks and Boundary Layers in Gases Moving at High Speed. TM 1113, Jan. 1947.
- Orlin, W. James; Lindner, Norman J. and Bitterly, Jack G.: Application of the Analogy Between Water Flow with a Free Surface and Two-Dimensional Compressible Gas Flow. TN 1185, Feb. 1947.
- Kantrowitz, Arthur: The Formation and Stability of Normal Shock Waves in Channel Flows. TN 1225, March 1947.
- Göthert, B. and Kawalki, K. H.: The Calculation of Compressible Flows with Local Regions of Supersonic Velocity. TM 1114, March 1947.
- Allen, H. Julian; Heaslet, Max A. and Nitzberg, Gerald E.: The Interaction of Boundary-Layer and Compression-Shock and Its Effect upon Airfoil Pressure Distributions. RM A7A02, April 1947.
- Beeler, De E.: Air-Flow Behavior over the Wing of an XP-51 Airplane as Indicated by Wing-Surface Tufts at Subcritical and Supercritical Speeds. RM L6L03, April 1947.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Laitone, Edmund V. and Pardee, Otway O'M.: Location of Detached Shock Wave in Front of a Body Moving at Supersonic Speeds. RM A7B10, May 1947.
- Perl, W.: Calculation of Compressible Flows past Aerodynamic Shapes by Use of the Streamline Curvature. TN 1328, June 1947.
- Sauer, R.: General Characteristics of the Flow Through Nozzles at Near Critical Speeds. TM 1147, June 1947.
- Eggink: Compression Shocks of Detached Flow. TM 1150, June 1947.
- Frankl, F.: On the Problems of Chaplygin for Mixed Sub- and Supersonic Flows. TM 1155, June 1947.
- Weise, A.: The Separation of Flow Due to Compressibility Shock. TM 1152, July 1947.
- Regenscheit, B.: Drag Reduction by Suction of the Boundary Layer Separated Behind Shock Wave Formation at High Mach Numbers. TM 1168, July 1947.

- Schäfer, Manfred: Equations for Adiabatic but Rotational Steady Gas Flows Without Friction. TM 1187, Aug. 1947.
- Kaplan, Carl: On Similarity Rules for Transonic Flows. TN 1527, Jan. 1948.
- Oswatitsch, K. and Wieghardt, K.: Theoretical Analysis of Stationary Potential Flows and Boundary Layers at High Speed. TM 1189, April 1948.
- Gothert, B.: Comparison of Drop and Wind-Tunnel Experiments on Bomb Drag at High Subsonic Speeds. TM 1186, May 1948.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow past Thick Airfoil Sections. TN 1657, July 1948.
- Stack, John and Lindsey, W. F.: Characteristics of Low-Aspect-Ratio Wings at Supercritical Mach Numbers. TN 1665, Aug. 1948.
- Emmons, Howard W.: Flow of a Compressible Fluid past a Symmetrical Airfoil in a Wind Tunnel and in Free Air. TN 1746, Nov. 1948.
- Hess, Robert V. and Gardner, Clifford S.: Study by the Prandtl-Glauert Method of Compressibility Effects and Critical Mach Number for Ellipsoids of Various Aspect Ratios and Thickness Ratios. TN 1792, Jan. 1949.
- Nitzberg, Gerald E. and Crandall, Stewart: A Study of Flow Changes Associated with Airfoil Section Drag Rise at Supercritical Speeds. TN 1813, Feb. 1949.
- Gothert, B. and Kawalki, K. H.: The Compressible Flow past Various Plane Profiles Near Sonic Velocity. TM 1203, March 1949.
- Oswatitsch, Kl. and Rothstein, W.: Flow Pattern in a Converging-Diverging Nozzle. TM 1215, March 1949.
- Nikolskii, A. A. and Taganov, G. I.: Gas Motion in a Local Supersonic Region and Conditions of Potential-Flow Breakdown. TM 1213, May 1949.
- Daley, Bernard N. and Hanna, Lillian E.: Subsonic Two-Dimensional-Flow Conditions Near and Airfoil Determined by Static Pressures Measured at the Tunnel Wall. TN 1873, April 1949.

- Mixed Flow Compressible (Cont.))
- Busemann, Adolf: A Review of Analytical Methods for the Treatment of Flows with Detached Shocks. TN 1858, April 1949.
- Schmieden, C. and Kawalki, K. H.: Contribution to the Problem of Flow at High Speed. TM 1233, June 1949.
- Moeckel, W. E.: Approximate Method for Predicting Form and Location of Detached Shock Waves Ahead of Plane or Axially Symmetric Bodies. TN 1921, July 1949.

SUPERSONIC FLOW (1.1.2.3)

- Riabouchinski, D.: On the Resistance of the Air at High Speeds and on the Automatic Rotation of Projectiles. TN 49, April 1921.
- Burzio, Pilippo: Aerodynamics and Ballistics. TM 111, July 1922.
- Ackeret, J.: Air Forces on Airfoils Moving Faster Than Sound. TM 317, June 1925.
- Huguenard, E.: High Velocity Wind Tunnels. (Their Application to Ballistics, Aerodynamics and Aeronautics.) TM 318, June 1925.
- Briggs, L. J. and Dryden, H. L.: Pressure Distribution over Airfoils at High Speeds. Rept. 255, 1927.
- Prandtl, L.: General Considerations on the Flow of Compressible Fluids. TM 805, Oct. 1936.
- Frössel, W.: Flow in Smooth Straight Pipes at Velocities Above and Below Sound Velocity. TM 844, Jan. 1938.
- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. Part I. Flows with No Energy Dissipation. TM 934, March 1940.
- Prandtl, L.: Recent Work on Airfoil Theory. TM 962, Dec. 1940.
- Stack, John: Compressibility Effects in Aeronautical Engineering. ACR, Aug. 1941.
- Kantrowitz, Arthur; Street, Robert E. and Erwin, John R.: Study of the Two-Dimensional Flow Through A Converging-Diverging Nozzle. CB 3D24, April 1943.

- Keenan, Joseph H. and Neumann, Ernest P.: Measurements of Friction Coefficients in a Pipe for Subsonic and Supersonic Flow of Air. ARR 3G13 (WR W-44), July 1943.
- Donaldson, Coleman duP.: Effects of Interaction Between Normal Shock and Boundary Layer. CB 4A27, Jan. 1944.
- Emmons, Howard W.: The Numerical Solution of Compressible Fluid Flow Problems. TN 932, May 1944.
- Kisenko, M. S.: Comparative Results of Tests of Several Different Types of Nozzles. TM 1066, June 1944.
- Brown, Clinton E. and Parker, Hermon M.: A Method for the Calculation of External Lift, Moment, and Pressure Drag of Slender Open-Nose Bodies of Revolution at Supersonic Speeds. Rept. 808, 1945.
- Kantrowitz, Arthur and Donaldson, Coleman duP.: Preliminary Investigation of Supersonic Diffusers. ACR L5D20 (WR L-713), May 1945.
- Bailey, F. J., Jr.; Mathews, Charles W. and Thompson, Jim Rogers: Drag Measurements at Transonic Speeds on a Freely Falling Body. ACR L5E03, June 1945.
- Bergman, Stefan: On Two-Dimensional Flows of Compressible Fluids. TN 972, Aug. 1945.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.
- Ferri, Antonio: Application of the Method of Characteristics to Supersonic Rotational Flow. Rept. 841, 1946.
- Garrick, I. E. and Rubinow, S. I.: Flutter and Oscillating Air-Force Calculations for an Airfoil in a Two-Dimensional Supersonic Flow. Rept. 846, 1946.
- Theodorsen, Theodore: Extension of the Chaplygin Proofs on the Existence of Compressible-Flow Solutions to the Supersonic Region. TN 1028, March 1946.
- Jones, Robert T.: Wing Plan Forms for High-Speed Flight. TN 1033, March 1946.
- Kantrowitz, Arthur: The Supersonic Axial-Flow Compressor. ACR L6D02, April 1946.

- Brown, Clinton E.: Internal and External Aerodynamics of Ducted Bodies at Supersonic Speeds. CB L6B26 (WR L-728), April 1946.
- Tsien, Hsue-Shen and Kuo, Yung-Huai:
 Two-Dimensional Irrotational Mixed
 Subsonic and Supersonic Flow of a
 Compressible Fluid and the Upper
 Critical Mach Number. TN 995, May
 1946.
- Jones, Robert T. and Margolis, Kenneth: Flow over a Slender Body of Revolution at Supersonic Velocities. TN 1081, Aug. 1946.
- Stamm, G.: Investigations of Pressure Distribution on Fast Flying Bodies. TM 1101, Sept. 1946.
- Lees, Lester and Lin, Chia Chiao: Investigation of the Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1115, Sept. 1946.
- Bergman, Stefan: On Supersonic and Partially Supersonic Flows. TN 1096, Dec. 1946.
- Wood, George P.: Calculation of Surface Temperatures in Steady Supersonic Flight. TN 1114, Dec. 1946.
- Sauer, R.: Method of Characteristics for Three-Dimensional Axially Symmetrical Supersonic Flows. TM 1133, Jan. 1947.
- Busemann, Adolf: Infinitesimal Conical Supersonic Flow. TM 1100, March 1947
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.
- Kantrowitz, Arthur: The Formation and Stability of Normal Shock Waves in Channel Flows. TN 1225, March 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Harmon, Sidney M. and Swanson, Margaret D.: Calculations of the Supersonic Wave Drag of Nonlifting Wings with Arbitrary Sweepback and Aspect Ratio Wings Swept Behind the Mach Lines. TN 1319, May 1947.

- Laitone, Edmund V. and Pardee, Otway O'M.: Location of Detached Shock Wave in Front of a Body Moving at Supersonic Speeds. RM A7B10, May 1947.
- Moeckel, W. E.: Theoretical Aerodynamic Coefficients of Two-Dimensional Supersonic Biplanes. TN 1316, June 1947.
- Perl, W.: Calculation of Compressible Flows past Aerodynamic Shapes by Use of the Streamline Curvature. TN 1328, June 1947.
- Ivey, H. Reese and Klunker, E. Bernard: Considerations of the Total Drag of Supersonic Airfoil Sections. TN 1371, July 1947.
- Moeckel, W. E. and Connors, J. F.: Charts for the Determination of Supersonic Air Flow Against Inclined Planes and Axially Symmetric Cones. TN 1373, July 1947.
- Evvard, John C.: Distribution of Wave Drag and Lift in the Vicinity of Wing Tips at Supersonic Speeds. TN 1382, July 1947.
- Garrick, I. E. and Rubinow, S. I.: Theoretical Study of Air Forces on an Oscillating or Steady Thin Wing in a Supersonic Main Stream. TN 1383, July 1947.
- Weise, A.: The Separation of Flow Due to Compressibility Shock. TM 1152, July 1947.
- Heybey: Analytical Treatment of Normal Condensation Shock. TM 1174, July 1947.
- Heaslet, Max A.; Lomax, Harvard and Jones, Arthur L.: Volterra's Solution of the Wave Equation as Applied to Three-Dimensional Supersonic Airfoil Problems. TN 1412, Aug. 1947.
- Hantzsche, W. and Wendt, H.: Cones in Supersonic Flow. TM 1157, Aug. 1947.
- Evvard, John C.: The Effects of Yawing Thin Pointed Wings at Supersonic Speeds. TN 1429, Sept. 1947.
- Margolis, Kenneth: Supersonic Wave Drag of Sweptback Tapered Wings at Zero Lift. TN 1448, Oct. 1947.
- Harmon, Sidney M.: Theoretical Supersonic Wave Drag of Untapered Sweptback and Rectangular Wings at Zero Lift. TN 1449, Oct. 1947.

- Subsonic Flow Compressible (Cont.)
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.
- The Staff of the Ames 1- by 3-foot Supersonic Wind-Tunnel Section: Notes and Tables for Use in the Analysis of Supersonic Flow. TN 1428, Dec. 1947.
- Heaslet, Max A. and Lomax, Harvard: The Use of Source-Sink and Doublet Distributions Extended to the Solution of Arbitrary Boundary Value Problems in Supersonic Flow. TN 1515, Jan. 1948.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Moeckel, W. E.: Effect of Yaw at Supersonic Speeds on Theoretical Aerodynamic Coefficients of Thin Pointed Wings with Several Types of Trailing Edge. TN 1549, March 1948.
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Oswatitsch, K. and Wieghardt, K.: Theoretical Analysis of Stationary Potential Flows and Boundary Layers at High Speed: TM 1189, April 1948.
- Ribner, Herbert S. and Malvestuto, Frank S., Jr.: Stability Derivatives of Triangular Wings at Supersonic Speeds. TN 1572, May 1948.
- Evvard, John C.: Theoretical Distribution of Lift on Thin Wings at Supersonic Speeds (An Extension). TN 1585, May 1948.
- Heaslet, Max A. and Lomax, Harvard: Two-Dimensional Unsteady Lift Problems in Supersonic Flight. TN 1621, June 1948.
- Crown, J. Conrad: Supersonic Nozzle Design. TN 1651, June 1948.
- Pinkel, I. Irving: Equations for the Design of Two-Dimensional Supersonic Nozzles. RM E8B02, June 1948.
- Ivey, H. Reese; Klunker, E. Bernard and Bowen, Edward N.: A Method for Determining the Aerodynamic Characteristics of Two- and Three-Dimensional Shapes at Hypersonic Speeds. TN 1613, July 1948.

- Maslen, Stephen H.: Method for Calculation of Pressure Distributions on Thin Conical Bodies of Arbitrary Cross Section in Supersonic Stream. TN 1659, July 1948.
- Tucker, Warren A.: Notes on Geared Tabs at Supersonic Speeds. RM L7L04, July 1948.
- Burcher, Marie A.: Compressible Flow Tables for Air. TN 1592, Aug. 1948.
- Neice, Mary M.: Tables and Charts of Flow Parameters Across Oblique Shocks. TN 1673, Aug. 1948.
- Cohen, Clarence B. and Evvard, John C.: Graphical Method of Obtaining Theoretical Lift Distributions on Thin Wings at Supersonic Speeds. TN 1676, Aug. 1948.
- Mirels, Harold: Theoretical Wave Drag and Lift of Thin Supersonic Ring Airfoils. TN 1678, Aug. 1948.
- Lagerstrom, P. A.: Linearized Supersonic Theory of Conical Wings. TN 1685, Aug. 1948.
- Evvard, John C.: A Linearized Solution for Time-Dependent Velocity Potentials Near Three-Dimensional Wings at Supersonic Speeds. TN 1699, Sept. 1948.
- Cohen, Clarence B.: Influence of Leading-Edge Suction on Lift-Drag Ratios of Wings at Supersonic Speeds. TN 1718, Oct. 1948.
- Ivey, H. Reese and Morrissette, Robert R.:
 An Approximate Determination of the
 Lift of Slender Cylindrical Bodies and
 Wing-Body Combinations at Very High
 Supersonic Speeds. TN 1740, Oct.
 1948.
- Mirels, Harold: Theoretical Method for Solution of Aerodynamic Forces on Thin Wings in Nonuniform Supersonic Stream with an Application to Tail Surfaces. TN 1736, Nov. 1948.
- Guderley, G.: Nonstationary Gas Flow in Thin Pipes of Variable Cross Section. TM 1196, Dec. 1948.
- Nielsen, Jack N. and Perkins, Edward W.: Charts for the Conical Part of the Downwash Field of Swept Wings at Supersonic Speeds. TN 1780, Dec. 1948.
- Shames, Harold and Seashore, Ferris L.:
 Design Data for Graphical Construction
 of Two-Dimensional Sharp-Edge-Throat
 Supersonic Nozzles. RM E8J12, Dec.
 1948.

- Supersonic Flow Compressible (Cont.)
- Thompson, Jim Rogers: A Rapid Graphical Method for Computing the Pressure Distribution at Supersonic Speeds on a Slender Arbitrary Body of Revolution. TN 1768, Jan. 1949.
- Ferri, Antonio: Method for Evaluating from Shadow or Schlieren Photographs the Pressure Drag in Two-Dimensional or Axially Symmetrical Flow Phenomena with Detached Shock. TN 1808, Feb. 1949.
- Ferri, Antonio: The Method of Characteristics for the Determination of Supersonic Flow over Bodies of Revolution at Small Angles of Attack. TN 1809, Feb. 1949.
- Baldwin, Barrett S., Jr.: Triangular Wings Cambered and Twisted to Support Specified Distributions of Lift at Supersonic Speeds. TN 1816, Feb. 1949.
- Busemann, A.: Compression Shocks in Two-Dimensional Gas Flows. TM 1199, Feb. 1949.
- Wiener, Bernard: Ambient Pressure Determination at High Altitudes by Use of Free-Molecule Theory. TN 1821, March 1949.
- Pfeiffer, F. and Meyer-König, W.: The Characteristics Method Applied to Stationary Two-Dimensional and Rotationally Symmetrical Gas Flows. TM 1211, March 1949.
- Oswatitsch, Kl. and Rothstein, W.: Flow, Pattern in a Converging-Diverging Nozzle. TM 1215, March 1949.
- Moeckel, W. E.: Use of Characteristic Surfaces for Unsymmetrical Supersonic Flow Problems. TN 1849, March 1949.
- Gooderum, Paul B.; Wood, George P. and Brevoort, Maurice J.: Investigation with an Interferometer of the Turbulent Mixing of a Free Supersonic Jet. TN 1857, April 1949.
- Frankl, F. I.: Effect of the Acceleration of Elongated Bodies of Revolution upon the Resistance in a Compressible Gas. TM 1230, May 1949.
- Bergman, Stefan: On Two-Dimensional Supersonic Flows. TN 1875, May 1949.
- Hess, Robert V.: Study of Unsteady Flow Disturbances of Large and Small Amplitudes Moving Through Supersonic or Subsonic Steady Flows. TN 1878, May 1949.

- Busemann, Adolf: A Review of Analytical Methods for the Treatment of Flows with Detached Shocks. TN 1858, April 1949.
- Hönl, H.: Two-Dimensional Wing Theory in the Supersonic Range. TM 1238, June 1949.
- Mirels, Harold and Haefeli, Rudolph C.: Line-Vortex Theory for Calculation of Supersonic Downwash. TN 1925, Aug. 1949.

VISCOUS FLOW

(1.1.3)

- Marchis, L.: Experimental Researches on the Resistance of Air. Rept. 12, 1916.
- Caldwell, F. W. and Fales, E. N.: Wind-Tunnel Studies in Aerodynamic Phenomena at High Speed. Rept. 83, 1920.
- Betz, A.: Vortices and the Related Principles of Hydrodynamics. TN 68, Nov. 1921
- Zahm, A. F.: Influence of Model Surface and Air Flow Texture on Resistance of Aerodynamic Bodies. Rept. 139, 1922.
- Wieselsberger, C.: New Data on the Laws of Fluid Resistance. TN 84, March 1922.
- Diehl, W. S.: Skin Frictional Resistance of Plane Surfaces in Air. Abstract of Recent German Tests, with Notes. TN 102, July 1922.
- Wieselsberger, C.: Further Information on the Laws of Fluid Resistance. TN 121, Dec. 1922.
- Tuckerman, L. B.: Notes on Aerodynamic Forces on Airship Hulls. TN 129, March 1923.
- Betz, A.: The "Magnus Effect," The Principle of the Flettner Rotor. TM 310, April 1925.
- Ackeret, J.: Removing Boundary Layer by Suction. TM 395, Jan. 1926.
- Prandtl, L. and Tietjens, O.: Kinetographic Flow Pictures. TM 364, May 1926.
- Prandtl, L.: Application of the "Magnus Effect" to the Wind Propulsion of Ships. TM 367, June 1926.
- Schrenk, Oskar: Experiments with a Sphere from Which the Boundary Layer Is Removed by Suction. TM 388, Nov. 1926.

17

- Dupont, M.: Multiplicity of Solution in Aerodynamics. TM 413, May 1927.
- Prandtl, L.: Motion of Fluids with Very Little Viscosity. TM 452, March 1928.
- Burgers, J. M.: Note on Research Work by Helmholtz and Wien Relating to the Form of Waves Propagated Along the Surface of Separation of Two Liquids. TM 455, March 1928.
- Wieland, K.: Experiments with a Wing from Which the Boundary Layer Is Removed by Pressure or Suction. TM 472, July 1928.
- Jacobs, Eastman N.: Sphere Drag Tests in the Variable Density Wind Tunnel. TN 312, Aug. 1929.
- Schrenk, Oskar: Experiments with a Wing Model from Which the Boundary Is Removed by Suction. TM 534, Oct. 1929.
- Schrenk, Oskar: The Boundary Layer as a Means of Controlling the Flow of Liquids and Gases. TM 555, March 1930.
- Ahlborn, F.: The Magnus Effect in Theory and in Reality. TM 567, May 1930.
- Hansen, M.: Velocity Distribution in the Boundary Layer of a Submerged Plate. TM 585, Oct. 1930.
- Parsons, John F. and Wallen, Jarvis A.:
 An Investigation of the Phenomenon of
 Separation in the Air Flow Around
 Simple Quadric Cylinders. TN 354,
 Nov. 1930,
- Schiller, L. and Hermann, R.: Resistance of Plates and Pipes at High Reynolds Numbers. TM 600, Jan. 1931.
- Cuno, Otto: Experimental Determination of the Thickness of the Boundary Layer Along a Wing Section. TM 679, Aug. 1932.
- Stuper, J.: Investigation of Boundary Layers on an Airplane Wing in Free Flight. TM 751, Aug. 1934.
- Schubauer, G. B.: Air Flow in a Separating Laminar Boundary Layer. Rept. 527, 1935.
- Doenhoff, Albert E. von: An Application of the Von Karman-Millikan Laminar Boundary-Layer Theory and Comparison with Experiment. TN 544, Oct. 1935.

- Dryden, Hugh L.: Air Flow in the Boundary Layer near a Plate. Rept. 562, 1936.
- Fediaevsky, K.: Turbulent Boundary Layer of an Airfoil. TM 822, April 1937.
- Clauser, Milton and Clauser, Francis: The Effect of Curvature on the Transition from Laminar to Turbulent Boundary Layer. TN 613, Sept. 1937.
- Gurjienko, G.: Universal Logarithmic Law of Velocity Distribution as Applied to the Investigation of Boundary Layer and Drag of Streamline Bodies at Large Reynolds Number. TM 842, Nov. 1937.
- Goett, Harry J. and Bicknell, Joseph: Comparison of Profile-Drag and Boundary-Layer Measurements Obtained in Flight and in the Full-Scale Wind Tunnel. TN 693, March 1939.
- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. Part II. Flows with Momentum Discontinuities (Hydraulic Jumps). TM 935, March 1940.
- Anon.: Standards for Discharge Measurement with Standardized Nozzles and Orifices. German Industrial Standard 1952. TM 952, Sept. 1940.
- Prandtl, L.: Note on the Calculation of Boundary Layers. TM 959, Nov. 1940.
- Katzoff, S.: The Design of Cooling Ducts with Special Reference to the Boundary Layer at the Inlet. ACR (WR L-322), Dec. 1940.
- Schrenk, O.: Boundary Layer Removal by Suction. TM 974, April 1941.
- Wetmore, J. W.; Zalovcik, J. A. and Platt, Robert C.: A Flight Investigation of the Boundary-Layer Characteristics and Profile Drag of the NACA 35-215 Laminar-Flow Airfoil at High Reynolds Numbers. MR (WR L-532), May 1941.
- Schultz-Grunow, F.: New Frictional Resistance Law for Smooth Plates. TM 986, Sept. 1941.
- Hartwig, G.: Observations of the Effect of Wing Appendages and Flaps on the Spread of Separation of Flow over the Wing. TM 988, Sept. 1941.
- Koppenfels, Werner V.: Two-Dimensional Potential Flow Past a Smooth Wall with Partly Constant Curvature. TM 996, Nov. 1941.

- Eckert, E. and Weise, W.: The Temperature of Unheated Bodies in a High-Speed Gas Stream. TM 1000, Dec. 1941.
- Weller, R.; Middlehurst, D. J. and Steiner, R.: The Photoviscous Properties of Fluids. TN 841, Feb. 1942.
- Pretsch, J.: Theoretical Solution of Profile Drag. TM 1009, April 1942.
- Mohr, Ernst: The Navier-Stokes Stress Principle for Viscous Fluids. TM 1029, Sept. 1942.
- Frankl, F.: Heat Transfer in the Turbulent Boundary Layer of a Compressible Gas at High Speeds; and Frankl, F. and Voishel, V.: Friction in the Turbulent Boundary Layer of a Compressible Gas at High Speeds. TM 1032, Oct. 1942.
- Mattioli, G. D.: Theory of Heat Transfer in Smooth and Rough Pipes. TM 1037, Dec. 1942.
- Schwabe, M.: Pressure Distribution in Nonuniform Two-Dimensional Flow. TM 1039, Jan. 1943.
- Charters, Alex C., Jr.: Transition Between Laminar and Turbulent Flow by Transverse Contamination. TN 891, March 1943.
- Seibert, Otto: Heat Transfer of Airfoils and Plates. TM 1044, April 1943.
- Schubauer, G. B. and Skramstad, H. K.: Laminar-Boundary-Layer Oscillations and Transition on a Flat Plate. ACR (WR W-8), April 1943.
- Liepmann, Hans W.: Investigations on Laminar Boundary-Layer Stability and Transition on Curved Boundaries. ACR 3H30 (WR W-107), Aug. 1943.
- Theodorsen, Theodore and Regier, Arthur: Experiments on Drag of Revolving Disks, Cylinders and Streamline Rods at High Speeds. Rept. 793, 1944.
- Tetervin, Neal: A Method for the Rapid Estimation of Turbulent Boundary-Layer Thicknesses for Calculating Profile Drag. ACR L4G14 (WR L-16), July 1944.
- Loitsianskii, L. G.: Integral Methods in the Theory of the Boundary Layer. TM 1070, July 1944.
- Liepmann, H. W.: Investigation of Boundary Layer Transition on Concave Walls. ACR 4J28 (WR W-87), Feb. 1945.

- Wood, George P.: Calculation of Surface Temperatures in Steady Supersonic Flight. TN 1114, Dec. 1946.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Allen, H. Julian; Heaslet, Max A. and Nitzberg, Gerald E.: The Interaction of Boundary-Layer and Compression-Shock and its Effect upon Airfoil Pressure Distributions. RM A7A02, April 1947.
- Ivey, H. Reese and Klunker, E. Bernard: Considerations of the Total Drag of Supersonic Airfoil Sections. TN 1371, July 1947.
- Sedov, L. I.: On the Theory of the Unsteady Motion of an Airfoil. TM 1156, July 1947.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.

LAMINAR FLOW (1.1.3.1.)

- Von Kármán, Théodor and Millikan, C. B.: On the Theory of Laminar Boundary Layers Involving Separation, Rept. 504, 1934.
- Jacobs, Eastman N.: Recent Progress Concerning the Aerodynamics of Wing Sections. MP 41, Feb. 1936.
- Tollmien, W.: General Instability Criterion of Laminar Velocity Distributions. TM 792, April 1936.
- Frössel, W.: Flow in Smooth Straight Pipes at Velocities Above and Below Sound Velocity. TM 844, Jan. 1938.
- Schubauer, G. B.: Air Flow in the Boundary Layer of an Elliptic Cylinder. Rept. 652, 1939.
- Von Doenhoff, Albert E.: Investigation of the Boundary Layer About a Symmetrical Airfoil in a Wind Tunnel of Low Turbulence. ACR (WR L-507), Aug. 1940.
- Jacobs, E. N. and von Doenhoff, A. E.: Formulas for Use in Boundary-Layer Calculations on Low-Drag Wings. ACR (WR L-319), Aug. 1941.
- Pretsch, J.: The Stability of Laminar Flow Past a Sphere. TM 1017, June 1942.

- Laminar Flow Viscous (Cont.))
- Allen, H. J. and Frick, Charles W.: Experimental Investigation of a New Type of Low-Drag Wing Nacelle Combination. ACR, July 1942.
- Von Doenhoff, Albert E. and Tetervin, Neal: Investigation of the Variation of Lift Coefficient with Reynolds Number at a Moderate Angle of Attack on a Low-Drag Airfoil. CB (WR L-661), Nov. 1942.
- Frick, Charles W. and McCullough, George B.: Tests of a Heated Low-Drag Airfoil. ACR (WR A-40), Dec. 1942.
- Nitzberg, Gerald E.: A Concise Theoretical Method for Profile-Drag Calculation. ACR 4B05, Feb. 1944.
- Zalovcik, John A.; Wetmore, J. W. and von Doenhoff, Albert E.: Flight Investigation of Boundary-Layer Control by Suction Slots on an NACA 35-215 Low-Drag Airfoil at High Reynolds Numbers. ACR 4B29 (WR L-521), Feb. 1944.
- Loitsianskii, L. G.: Integral Methods in the Theory of the Boundary Layer. TM 1070, July 1944.
- Loftin, Laurence K., Jr.: Effects of Specific Types of Surface Roughness on Boundary-Layer Transition. ACR L5J29a (WR L-48), Feb. 1946.
- Von Kármán, Th.: On Laminar and Turbulent Friction. TM 1092, Sept. 1946.
- Lees, Lester and Lin, Chia Chiao: Investigation of the Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1115, Sept. 1946.
- Jones, Robert T.: Effects of Sweepback on Boundary Layer and Separation. Rept. 884, 1947.
- Allen, H. Julian and Nitzberg, Gerald E.:
 The Effect of Compressibility on the
 Growth of the Laminar Boundary Layer
 on Low-Drag Wings and Bodies. TN
 1255, April 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Liepmann, Hans W. and Fila, Gertrude H.: Investigations of Effects of Surface Temperature and Single Roughness Elements on Boundary-Layer Transition. TN 1196, April 1947.

- Heaslet, Max A. and Nitzberg, Gerald E.: The Calculation of Drag for Airfoil Sections and Bodies of Revolution at Subcritical Speeds. RM A7B06, April 1947.
- Smith, Newell H.: Exploratory Investigation of Laminar-Boundary-Layer Oscillations on a Rotating Disk. TN 1227, May 1947.
- Lees, Lester: The Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1360, July 1947.
- Hicks, Bruce L.; Montgomery, Donald J. and Wasserman, Robert W.: The One-Dimensional Theory of Steady Compressible Fluid Flow in Ducts with Friction and Heat Addition. TN 1336, July 1947.
- Tetervin, Neal: A Review of Boundary-Layer Literature. TN 1384, July 1947.
- Hall, Charles F. and Fitzgerald, Fred F.: An Approximate Method for Calculating the Effect of Surface Roughness on the Drag of an Airplane. RM A7B24, July 1947.
- Pfenninger, Werner: Investigations on Reductions of Friction on Wings, in Particular by Means of Boundary Layer Suction. TM 1181, Aug. 1947.
- Bussmann, K. and Ulrich, A.: Systematic Investigations of the Influence of the Shape of the Profile upon the Position of the Transition Point. TM 1185, Oct. 1947.
- Tetervin, Neal: Boundary-Layer Momentum Equations for Three-Dimensional Flow. TN 1479, Oct. 1947.
- Brennecke: Maintaining Laminar Flow in the Boundary Layer Using a Swept-Back Wing. TM 1180, Feb. 1948.
- Oswatitsch, K. and Wieghardt, K.: Theoretical Analysis of Stationary Potential Flows and Boundary Layers at High Speed. TM 1189, April 1948.
- Braslow, Albert L.; Visconti, Fioravante and Burrows, Dale L.: Preliminary Wind-Tunnel Investigation of the Effect of Area Suction on the Laminar Boundary Layer over an NACA 64A010 Airfoil. RM L7L15, April 1948.
- Nitzberg, Gerald E. and Crandall, Stewart:
 Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.

Laminar Flow - Viscous (Cont.)

- Tetervin, Neal: Laminar Flow of a Slightly Viscous Incompressible Fluid that Issues from a Slit and Passes over a Flat Plate. TN 1644, June 1948.
- Boelter, L. M. K.; Grossman, L. M.; Martinelli, R. C. and Morrin, E. H.: An Investigation of Aircraft Heaters. XXIX - Comparison of Several Methods of Calculating Heat Losses from Airfoils. TN 1453, Oct. 1948.
- Braslow, Albert L. and Visconti, Fioravante: Investigation of Boundary-Layer Reynolds Number for Transition on an NACA 65(215)-114 Airfoil in the Langley Two-Dimensional Low-Turbulence Pressure Tunnel. TN 1704, Oct. 1948.
- Tetervin, Neal: Remarks Concerning the Behavior of the Laminar Boundary Layer in Compressible Flows. TN 1805, Jan. 1949.
- Chapman, Dean R.: Laminar Mixing of a Compressible Fluid. TN 1800, Feb. 1949.
- Schlichting, H.: An Approximate Method for Calculation of the Laminar Boundary Layer with Suction for Bodies of Arbitrary Shape. TM 1216, March 1949.
- Iglisch, Rudolf: Exact Calculation of Laminar Boundary Layer in Longitudinal Flow over a Flat Plate with Homogeneous Suction. TM 1205, April 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I - Laminar Flows. TM 1217, April 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Gault, Donald E.: Boundary-Layer and Stalling Characteristics of the NACA 63-009 Airfoil Section. TN 1894, June 1949.
- Burrows, Dale L.; Braslow, Albert L. and Tetervin, Neal: Experimental and Theoretical Studies of Area Suction for the Control of the Laminar Boundary Layer on a Porous Bronze NACA 64A010 Airfoil. TN 1905, July 1949.
- Lessen, Martin: On the Stability of the Free Laminar Boundary Layer Between Parallel Streams. TN 1929, Aug. 1949.

TURBULENT FLOW (1.1.3.2)

- Bateman, H.: The Decay of a Simple Eddy. Rept. 144, 1922.
- LePage, W. L. and Nichols, J. T.: The Effect of Wind Tunnel Turbulence upon the Forces Measured on Models. TN 191, May 1924.
- Dryden, H. L. and Heald, R. H.: Investigation of Turbulence in Wind Tunnels by a Study of the Flow About Cylinders. Rept. 231, 1926.
- Prandtl, L.: Turbulent Flow. TM 435, Oct. 1927.
- Dryden, H. L. and Kuethe, A. M.: Effect of Turbulence in Wind Tunnel Measurements. Rept. 342, 1929.
- Dryden, Hugh L.: Reduction of Turbulence in Wind Tunnels. Rept. 392, 1931.
- Tollmien, W.: The Production of Turbulence. TM 609, March 1931.
- Von Kármán, Th.: Mechanical Similitude and Turbulence. TM 611, March 1931.
- Prandtl, L.: Effect of Stabilizing Forces on Turbulence. TM 625, June 1931.
- Taylor, C. Fayette: A Suggested Method for Measuring Turbulence. TN 380, June 1931.
- Ahlborn, Fr.: Turbulence and Mechanism of Resistance on Spheres and Cylinders. TM 653, Jan. 1932.
- Gruschwitz, E.: The Process of Separation in the Turbulent Friction Layer. TM 699, Feb. 1933.
- Prandtl, L.: Recent Results of Turbulence Research. TM 720, Aug. 1933.
- Schubauer, G. B. and Dryden, H. L.: The Effect of Turbulence on the Drag of Flat Plates. Rept. 546, 1935.
- Jacobs, Eastman N.: Recent Progress Concerning the Aerodynamics of Wing Sections. MP 41, Feb. 1936.
- Schmidbauer, Hans: Behavior of Turbulent Boundary Layers on Curved Convex Walls. TM 791, April 1936.
- Dryden, Hugh L.; Schubauer, G. B.; Mock, W. C., Jr. and Skramstad, H. K.:
 Measurements of Intensity and Scale of Wind-Tunnel Turbulence and Their Relation to the Critical Reynolds Number of Spheres. Rept. 581, 1937.
- Schlichting, H.: Experimental Investigation of the Problem of Surface Roughness. TM 823, April 1937.

- Turbulent Flow Viscous (Cont.)
- Frössel, W.: Flow in Smooth Straight Pipes at Velocities Above and Below Sound Velocity. TM 844, Jan. 1938.
- Von Doenhoff, Albert E.: A Method of Rapidly Estimating the Position of the Laminar Separation Point. TN 671, Oct. 1938.
- Schubauer, G. B.: Air Flow in the Boundary Layer of an Elliptic Cylinder. Rept. 652, 1939.
- Mayer, Edwin: Effect of Transition in Cross-Sectional Shape on the Development of the Velocity and Pressure Distribution of Turbulent Flow in Pipes. TM 903, Aug. 1939.
- Von Doenhoff, Albert E.: Investigation of the Boundary Layer About a Symmetrical Airfoil in a Wind Tunnel of Low Turbulence. ACR (WR L-507), Aug. 1940.
- Jacobs, W.: Variation in Velocity Profile with Change in Surface Roughness of Boundary. TM 951, Sept. 1940.
- Jacobs, E. N. and von Doenhoff, A. E.: Formulas for Use in Boundary-Layer Calculations on Low-Drag Wings. ACR (WR L-319), Aug. 1941.
- Wieghardt, K.: Correlation of Data on the Statistical Theory of Turbulence. TM 1008, March 1942.
- Shih-I, Pai: Turbulent Flow Between Rotating Cylinders. TN 892, March 1943.
- Reichardt, H.: Heat Transfer Through Turbulent Friction Layers. TM 1047, Sept. 1943.
- Frankl, F. and Voishel, V.: Turbulent Friction in the Boundary Layer of a Flat Plate in a Two-Dimensional Compressible Flow at High Speeds. TM 1053, Dec. 1943.
- Nitzberg, Gerald E.: A Concise Theoretical Method for Profile Drag Calculation. ACR 4B05, Feb. 1944.
- Keenan, Joseph H. and Neumann, Ernest P.: Friction in Pipes at Supersonic and Subsonic Velocities. TN 963, Jan. 1945.
- Tollmien, Walter: Calculation of Turbulent Expansion Processes. TM 1085, Sept. 1945.
- Loitsianskii, L. G.: Some Basic Laws of Isotropic Turbulent Flow. TM 1079, Oct. 1945.

- Schubauer, G. B. and Klebanoff, P. S.: Theory and Application of Hot-Wire Instruments in the Investigation of Turbulent Boundary Layers. ACR 5K27 (WR W-86), March 1946.
- Jones, Robert T. and Margolis, Kenneth: Flow over a Slender Body of Revolution at Supersonic Velocities. TN 1081, Aug. 1946.
- Von Kármán, Th.: On Laminar and Turbulent Friction. TM 1092, Sept. 1946.
- Viktorin, K.: Investigation of Turbulent Mixing Processes. TM 1096, Oct. 1946.
- Shelkin, K. I.: On Combustion in a Turbulent Flow. TM 1110, Feb. 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Heaslet, Max A. and Nitzberg, Gerald E.: The Calculation of Drag for Airfoil Sections and Bodies of Revolution at Subcritical Speeds. RM A7B06, April 1947.
- Brown, W. Byron: Friction Coefficients in a Vaneless Diffuser. TN 1311, May 1947.
- Tetervin, Neal: A Review of Boundary-Layer Literature. TN 1384, July 1947.
- Hall, Charles F. and Fitzgerald, Fred F.: An Approximate Method for Calculating the Effect of Surface Roughness on the Drag of an Airplane. RM A7B24, July 1947.
- Liepmann, Hans Wolfgang and Laufer, John: Investigations on Free Turbulent Mixing. TN 1257, Sept. 1947.
- Tetervin, Neal: Boundary-Layer Momentum Equations for Three-Dimensional Flow. TN 1479, Oct. 1947.
- Gourzhienko, G. A.: The Turbulent Flow in Diffusers of Small Divergence Angle. TM 1137, Oct. 1947.
- Bussmann, K. and Ulrich, A.: Systematic Investigations of the Influence of the Shape of the Profile upon the Position of the Transition Point. TM 1185, Oct. 1947.
- Weske, John R.: Experimental Investigation of Velocity Distributions Downstream of Single Duct Bends. TN 1471, Jan. 1948.
- Brennecke: Maintaining Laminar Flow in the Boundary Layer Using a Swept-Back Wing. TM 1180, Feb. 1948.

- Oswatitsch, K. and Wieghardt, K.: Theoretical Analysis of Stationary Potential Flows and Boundary Layers at High Speed. TM 1189, April 1948.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.
- Boelter, L. M. K.; Grossman, L. M.; Martinelli, R. C. and Morrin, E. H.: An Investigation of Aircraft Heaters. XXIX - Comparison of Several Methods of Calculating Heat Losses from Airfoils. TN 1453, Oct. 1948.
- Braslow, Albert L. and Visconti, Fioravante: Investigation of Boundary-Layer Reynolds Number for Transition on an NACA 65(215)-114 Airfoil in the Langley Two-Dimensional Low-Turbulence Pressure Tunnel. TN 1704, Oct. 1948.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II - Turbulent Flows. TM 1218, April 1949.
- Gooderum, Paul B.; Wood, George P. and Brevoort, Maurice J.: Investigation with an Interferometer of the Turbulent Mixing of a Free Supersonic Jet. TN 1857, April 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Gault, Donald E.: Boundary-Layer and Stalling Characteristics of the NACA 63-009 Airfoil Section. TN 1894, June 1949.
- McCullough, George B. and Gault, Donald E.: Boundary-Layer and Stalling Characteristics of the NACA 64A006 Airfoil Section. TN 1923, Aug. 1949.

JET MIXING (1.1.3.3)

- Betz, A. and Petersohn, E.: Application of the Theory of Free Jets. TM 667, April 1932.
- Forthmann, E.: Turbulent Jet Expansion. TM 789, March 1936.
- Corrsin, Stanley: Investigation of Flow in an Axially Symmetrical Heated Jet of Air. ACR 3L23 (WR W-94), Dec. 1943.
- Abramovich, G. N.: The Theory of a Free Jet of a Compressible Gas. TM 1058, March 1944.

- Chaplygin, S.: Gas Jets. TM 1063, Aug. 1944.
- Corrsin, Stanley: Investigation of the Behavior of Parallel Two-Dimensional Air Jets. ACR 4H24 (WR W-90), Nov. 1944.
- Viktorin, K.: Investigation of Turbulent Mixing Processes. TM 1096, Oct. 1946.
- Sauer, R.: Method of Characteristics for Three-Dimensional Axially Symmetrical Supersonic Flows. TM 1133, Jan. 1947.
- Frankl, F.: On the Problems of Chaplygin for Mixed Sub- and Supersonic Flows. TM 1155, June 1947.
- Callaghan, Edmund E. and Ruggeri, Robert S.: Investigation of the Penetration of an Air Jet Directed Perpendicularly to an Air Stream. TN 1615, June 1948.
- Tetervin, Neal: Laminar Flow of a Slightly Viscous Incompressible Fluid that Issues from a Slit and Passes Over a Flat Plate. TN 1644, June 1948.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I - Laminar Flows. TM 1217, April 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II - Turbulent Flows. TM 1218, April 1949.
- Gooderum, Paul B.; Wood, George P. and Brevoort, Maurice J.: Investigation with an Interferometer of the Turbulent Mixing of a Free Supersonic Jet. TN 1857, April 1949.
- Corrsin, Stanley and Uberoi, Mahinder S.: Further Experiments on the Flow and Heat Transfer in a Heated Turbulent Air Jet. TN 1865, April 1949.
- Küchemann, D.: Jet Diffusion in Proximity of a Wall. TM 1214, May 1949.
- Lessen, Martin: On the Stability of the Free Laminar Boundary Layer Between Parallel Streams. TN 1929, Aug. 1949.

AERODYNAMICS WITH HEAT

(1.1.4)

- Eliás, Franz: The Transference of Heat from a Hot Plate to an Air Stream. TM 614, April 1931.
- Ferrari, C.: The Transport of Vorticity Through Fluids in Turbulent Motion (In the Light of the Prandtl and Taylor Theories). TM 799, July 1936.

- Aerodynamics with Heat (Cont.)
- Brevoort, Maurice J.; Joyner, Upshur T. and Wood, George P.: The Effect of Altitude on Cooling. ARR (L-386), March 1943.
- Wood, George P.: Use of Stagnation Temperature in Calculating Rate of Heat Transfer in Aircraft Heat Exchangers. RB 3J30 (WR L-298), Oct. 1943.
- Frankl, F. and Voishel, V.: Turbulent Friction in the Boundary Layer of a Flat Plate in a Two-Dimensional Compressible Flow at High Speeds. TM 1053, Dec. 1943.
- Corrsin, Stanley: Investigation of Flow in an Axially Symmetrical Heated Jet of Air. ACR 3L23 (WR W-94), Dec. 1943.
- Kantrowitz, Arthur: Effects of Heat-Capacity Lag in Gas Dynamics. ARR 4A22 (WR L-457), Jan. 1944.
- Corrsin, Stanley: Investigation of the Behavior of Parallel Two-Dimensional Air Jets. ACR 4H24 (WR W-90), Nov. 1944.
- Gray, V. H. and Campbell, R. G.: A
 Method for Estimating Heat Requirements for Ice Prevention on GasHeated Hollow Propeller Blades. TN
 1494, Dec. 1947.
- Turner, L. Richard; Addie, Albert N. and Zimmerman, Richard H.: Charts for the Analysis of One-Dimensional Steady Compressible Flow. TN 1419, Jan. 1948.

HEATING (1.1.4.1)

- Brun, Edmond: Distribution of Temperatures over an Airplane Wing with Reference to the Phenomena of Ice Formation. TM 883, Dec. 1938.
- Eckert, E. and Weise, W.: The Temperature of Unheated Bodies in a High-Speed Gas Stream. TM 1000, Dec. 1941.
- Frankl, F.: Heat Transfer in the Turbulent Boundary Layer of a Compressible Gas at High Speeds; and Frankl, F. and Voishel, V.: Friction in the Turbulent Boundary Layer of a Compressible Gas at High Speeds. TM 1032, Oct. 1942.
- Hardy, J. K.: Kinetic Temperature of Wet Surfaces. - A Method of Calculating the Amount of Alcohol Required To Prevent Ice, and the Derivation of the Psychrometric Equation. ARR 5G13 (WR A-8), Sept. 1945.

- Wood, George P.: Calculation of Surface Temperatures in Steady Supersonic Flight. TN 1114, Dec. 1946.
- Darsow, John F. and Selna, James: A Flight Investigation of the Thermal Performance of an Air-Heated Propeller. TN 1178, April 1947.
- Allen, H. Julian and Nitzberg, Gerald E.: The Effect of Compressibility on the Growth of the Laminar Boundary Layer on Low-Drag Wings and Bodies. TN 1255, April 1947.
- Scherrer, Richard: The Effects of Aerodynamic Heating and Heat Transfer on the Surface Temperature of a Body of Revolution in Steady Supersonic Flight. TN 1300, July 1947.
- Neel, Carr B., Jr.; Bergrun, Norman R.; Jukoff, David and Schlaff, Bernard A.: The Calculation of the Heat Required for Wing Thermal Ice Prevention in Specified Icing Conditions. TN 1472, Dec. 1947.
- Tendeland, Thorval and Schlaff, Bernard A.: Temperature Gradients in the Wing of a High-Speed Airplane During Dives From High Altitudes. TN 1675, July 1948.
- Huston, Wilber B.; Warfield, Calvin N. and Stone, Anna Z.: A Study of Skin Temperatures of Conical Bodies in Supersonic Flight. TN 1724, Oct. 1948.
- Lo, Hsu: Determination of Transient Skin Temperature of Conical Bodies During Short-Time, High-Speed Flight. TN 1725, Oct. 1948.

HEAT TRANSFER (1.1.4.2)

- Theodorsen, Theodore and Clay, William C.: Ice Prevention on Aircraft by Means of Engine Exhaust Heat and a Technical Study of Heat Transmission From a Clark Y Airfoil. Rept. 403, 1931.
- Crocco, Luigi: Transmission of Heat From a Flat Plate to a Fluid Flowing at High Velocity. TM 690, Oct. 1932.
- Rodert, Lewis A.: The Effects of Aerodynamic Heating on Ice Formations on Airplane Propellers. TN 799, March 1941.
- Brevoort, M. J. and Tifford, A. N.: An Experimental Investigation of Flow Across Tube Banks. ARR (WR L-232), March 1942.

- Heat Transfer Aerodynamic (Cont.)
- Frankl, F.: Heat Transfer in the Turbulent Boundary Layer of a Compressible Gas at High Speeds; and Frankl, F. and Voishel, V.: Friction in the Turbulent Boundary Layer of a Compressible Gas at High Speeds. TM 1032, Oct. 1942.
- Mattioli, G. D.: Theory of Heat Transfer in Smooth and Rough Pipes. TM 1037, Dec. 1942.
- Joyner, Upshur T. and Palmer, Carl B.:
 An Experimental Survey of Flow
 Across Banks of Elliptical and Pointed
 Tubes. ARR (WR L-609), Jan. 1943.
- Martinelli, R. C.; Guibert, A. G.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VIII -A Simplified Method for the Calculation of the Unit Thermal Conductance Over Wings. ARR (WR W-14), March 1943.
- Seibert, Otto: Heat Transfer of Airfoils and Plates. TM 1044, April 1943.
- Eckert, E. and Drewitz, O.: The Heat Transfer to a Plate in Flow at High Speed. TM 1045, May 1943.
- Reichardt, H.: Heat Transfer Through Turbulent Friction Layers. TM 1047, Sept. 1943.
- Lelchuk, V. L.: Heat Transfer and Hydraulic Flow Resistance for Streams of High Velocity. TM 1054, Dec. 1943.
- Allen, H. Julian and Look, Bonne C.: A
 Method for Calculating Heat Transfer
 in the Laminar Flow Region of Bodies.
 Rept. 764, 1944.
- Nielsen, Jack N.: Compressibility Effects on Heat Transfer and Pressure Drop in Smooth Cylindrical Tubes. ARR L4C16 (WR L-179), March 1944.
- Becker, John V. and Baals, Donald D.: Simple Curves for Determining the Effects of Compressibility on Pressure Drop Through Radiators. ACR L4I23 (WR L-6), Sept. 1944.
- Frick, Charles W., Jr. and McCullough, George B.: A Method for Determining the Rate of Heat Transfer From a Wing or Streamline Body. Rept. 830, 1945.
- Hardy, J. K.: An Analysis of the Dissipation of Heat in Conditions of Icing From a Section of the Wing of the C-46 Airplane. Rept. 831, 1945.
- Corson, Blake W., Jr. and Maynard, Julian D.: Analysis of Propeller Efficiency Losses Associated With Heated-Air Thermal De-Icing. TN 1112, July 1946.

- Wood, George P.: Calculation of Surface Temperatures in Steady Supersonic Flight. TN 1114, Dec. 1946.
- Darsow, John F. and Selna, James: A Flight Investigation of the Thermal Performance of an Air-Heated Propeller. TN 1178, April 1947.
- Heybey: Analytical Treatment of Normal Condensation Shock: TM 1174, July 1947.
- Scherrer, Richard: The Effects of Aerodynamic Heating and Heat Transfer on the Surface Temperature of a Body of Revolution in Steady Supersonic Flight. TN 1300, July 1947.
- Pollmann, Erich: Temperatures and Stresses on Hollow Blades for Gas Turbines. TM 1183, Sept. 1947.
- Neel, Carr B., Jr.; Bergrun, Norman R.; Jukoff, David and Schlaff, Bernard A.: The Calculation of the Heat Required for Wing Thermal Ice Prevention in Specified Icing Conditions. TN 1472, Dec. 1947.
- Gray, V. H. and Campbell, R. G.: A Method for Estimating Heat Requirements for Ice Prevention on Gas-Heated Hollow Propeller Blades. TN 1494, Dec. 1947.
- Ellerbrock, Herman H., Jr.; Wcislo, Chester R. and Dexter, Howard E.: Analysis, Verification, and Application of Equations and Procedures for Design of Exhaust-Pipe Shrouds. TN 1495, Dec. 1947.
- Von Doenhoff, Albert E.: Note on Similarity Conditions for Flows With Heat Transfer. TN 1577, April 1948.
- Boelter, L. M. K.; Young, G. and Iversen, H. W.: An Investigation of Aircraft Heaters. XXVII - Distribution of Heat-Transfer Rate in the Entrance Section of a Circular Tube. TN 1451, July 1948.
- Stalder, Jackson R. and Jukoff, David: Heat Transfer to Bodies Traveling at High Speed in the Upper Atmosphere. TN 1682, Aug. 1948.
- Boelter, L. M. K.; Grossman, L. M.; Martinelli, R. C. and Morrin, E. H.: An Investigation of Aircraft Heaters. XXIX - Comparison of Several Methods of Calculating Heat Losses From Airfoils. TN 1453, Oct. 1948.
- Huston, Wilber B.; Warfield, Calvin N. and Stone, Anna Z.: A Study of Skin Temperatures of Conical Bodies in Supersonic Flight. TN 1724, Oct. 1948.

- Heat Transfer Merodynamic (Cont.)
- Lo, Hsu: Determination of Transient Skin Temperature of Conical Bodies During Short-Time, High-Speed Flight. TN 1725, Oct. 1948.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II - Turbulent Flows. TM 1218, April 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Sams, Eldon W. and Desmon, Leland G.:
 Heat Transfer From High-Temperature
 Surfaces to Fluids. III Correlation
 of Heat-Transfer Data for Air Flowing
 in Silicon Carbide Tube with Rounded
 Entrance, Inside Diameter of 3/4 Inch,
 and Effective Length of 12 Inches.
 RM E9D12, June 1949.

ADDITIONS OF HEAT (1.1.4.3)

- Elias, Franz: The Transference of Heat From a Hot Plate to an Air Stream. TM 614, April 1931.
- Rodert, Lewis A.: The Effects of Aerodynamic Heating on Ice Formations on Airplane Propellers. TN 799, March 1941.
- Frick, Charles W. and McCullough, George B.: Tests of a Heated Low Drag Airfoil. ACR (WR A-40), Dec. 1942.
- Becker, John V. and Baals, Donald D.: Simple Curves for Determining the Effects of Compressibility on Pressure Drop Through Radiators. ACR L4I23 (WR L-6), Sept. 1944.
- Hardy, J. K.: An Analysis of the Dissipation of Heat in Conditions of Icing from a Section of the Wing of the C-46 Airplane. Rept. 831, 1945.
- Hicks, Bruce L.: Addition of Heat to a Compressible Fluid in Motion. ACR E5A29 (WR E-88), Feb. 1945.
- McAdams, William H.; Nicolai, Lloyd A. and Keenan, Joseph H.: Measurements of Recovery Factors and Coefficients of Heat Transfer in a Tube for Subsonic Flow of Air. TN 985, June 1945.
- Shultz-Grunow, F.: Gas-Dynamic Investigations of the Pulse-Jet Tube. TM 1131, Feb. 1947.
- Liepmann, Hans W. and Fila, Gertrude H.: Investigations of Effects of Surface Temperature and Single Roughness Elements on Boundary-Layer Transition. TN 1196, April 1947.

- Heybey: Analytical Treatment of Normal Condensation Shock. TM 1174, July 1947.
- Habel, Louis W. and Gallagher, James J.: Tests to Determine the Effect of Heat on the Pressure Drop Through Radiator Tubes. TN 1362, July 1947.
- Sanger, E. and Bredt, J.: A Ram-Jet Engine for Fighters. TM 1106, Oct. 1947.
- Neel, Carr B., Jr.; Bergrun, Norman R.; Jukoff, David and Schlaff, Bernard A.: The Calculation of the Heat Required for Wing Thermal Ice Prevention in Specified Icing Conditions. TN 1472, Dec. 1947.
- Turner, L. Richard; Addie, Albert N. and Zimmerman, Richard H.: Charts for the Analysis of One-Dimensional Steady Compressible Flow. TN 1419, Jan. 1948.
- Von Doenhoff, Albert E.: Note on Similarity Conditions for Flows with Heat Transfer. TN 1577, April 1948.
- Humble, Leroy V.; Lowdermilk, Warren H. and Grele, Milton: Heat Transfer From High-Temperature Surfaces to Fluids. I Preliminary Investigation with Air in Inconel Tube with Rounded Entrance, Inside Diameter of 0.4 Inch, and Length of 24 Inches. RM E7L31, May 1948.
- Gallagher, James J. and Habel, Louis W.: Experimental Data Concerning the Effect of High Heat-Input Rates on the Pressure Drop Through Radiator Tubes. RM L8F18, Sept. 1948.
- Lowdermilk, Warren H. and Grele, Milton D.: Heat Transfer from High-Temperature Surfaces to Fluids. II Correlation of Heat-Transfer and Friction Data for Air Flowing in Inconel Tube with Rounded Entrance. RM E8L03, March 1949.
- Sams, Eldon W. and Desmon, Leland G.:
 Heat Transfer From High-Temperature
 Surfaces to Fluids. III Correlation
 of Heat-Transfer Data for Air Flowing
 in Silicon Carbide Tube with Rounded
 Entrance, Inside Diameter of 3/4 Inch,
 and Effective Length of 12 Inches.
 RM E9D12, June 1949.

FLOW OF RAREFIED GASES

(1.1.5)

Williams, Thomas W. and Benson, James M.: Preliminary Investigation of the Use of Afterglow for Visualizing Low-Density Compressible Flows. TN 1900, June 1949.

Flow of Rarefied Gases (Cont.)

SLIP FLOW (1.1.5.1)

Donaldson, Coleman duP.: An Approximate
Method for Estimating the Incompressible Laminar Boundary-Layer Characteristics on a Flat Plate in Slipping
Flow. RM L9C02, May 1949.

FREE MOLECULE FLOW (1.1.5.2)

Stalder, Jackson R. and Jukoff, David: Heat Transfer to Bodies Traveling at High Speed in the Upper Atmosphere. TN 1682, Aug. 1948.

Wiener, Bernard: Ambient Pressure Determination at High Altitudes by Use of Free-Molecule Theory. TN 1821, March 1949.

Wings

(1.2)

- Küssner, Hans Georg: Stresses Produced in Airplane Wings by Gusts. TM 654, Jan. 1932.
- Draley, Eugene C.: A Comparison at High Speed of the Aerodynamic Merits of Models of Medium Bombers Having Thickened Wing Roots and Having Wings with Nacelles. ACR 3L03 (WR L390), Dec. 1943.
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.

WING SECTION

(1.2.1)

- Ackeret, J.: Recent Experiments at the Gottingen Aerodynamic Institute. TM 323, July 1925.
- National Advisory Committee for Aeronautics: Aerodynamic Characteristics of Airfoils IV. Rept. 244, 1928.
- National Advisory Committee for Aeronautics: Aerodynamic Characteristics of Airfoils V. Rept. 286, 1928.
- Pinkerton, Robert M. and Greenberg, Harry: Aerodynamic Characteristics of a Large Number of Airfoils Tested in the Variable-Density Wind Tunnel. Rept. 628, 1938.
- Ferri, Antonio: Investigations and Experiments in the Guidonia Supersonic Wind Tunnel. TM 901, July 1939.
- Savelyev, V. V.: Determination of the Mass Moments and Radii of Inertia of the Sections of a Tapered Wing and the Center-of-Gravity Line Along the Wing Span. TM 1052, Dec. 1943.
- Kuhl, R. and Raab, K.: A Photographic Profile Recorder for Airscrews and Wing Models. TM 1088, June 1946.
- Serebrisky, Y. M. and Biachuev, S. A.: Wind-Tunnel Investigation of the Horizontal Motion of a Wing Near the Ground. TM 1095, Sept. 1946.
- Ivey, H. Reese and Klunker, E. Bernard: Considerations of the Total Drag of Supersonic Airfoil Sections. TN 1371, May 1947.

- Pierce, Harold B. and Trauring, Mitchell: Gust-Tunnel Tests to Determine Influence of Airfoil Section Characteristics on Gust-Load Factors. TN 1632, July 1948.
- Nuber, Robert J. and Needham, James R., Jr.: Exploratory Wind-Tunnel Investigation of the Effectiveness of Area Suction in Eliminating Leading-Edge Separation over an NACA 641A212 Airfoil. TN 1741, Nov. 1948.
- Rose, Leonard M. and Altman, John M.: Low-Speed Experimental Investigation of a Thin, Faired, Double-Wedge Airfoil Section with Nose and Trailing-Edge Flaps. TN 1934, Aug. 1949.

SECTION THEORY (1.2.1.1.)

- De Bothezat, George: An Introduction to the Study of the Laws of Air Resistance of Aerofoils. Rept. 28, 1920.
- Prandtl, L.: Theory of Lifting Surfaces.
 Part I. TN 9, July 1920.
- Prandtl, L.: Theory of Lifting Surfaces. Part II. TN 10, Aug. 1920.
- Prandtl, L.: Applications of Modern Hydrodynamics to Aeronautics. Rept. 116, 1921.
- Le Sueur: Analytical Methods for Computing the Polar Curves of Airplanes. TM 8, March 1921.
- Translated by Paris Office, NACA: The Law Relating to Air Currents. TM 10, March 1921.
- Warner, Edward P.: The Choice of Wing Sections for Airplanes. TN 73, Nov. 1921.
- Munk, Max M.: General Theory of Thin Wing Sections. Rept. 142, 1922.
- Delanghe, C.: Marcel Besson Wing Sections. TM 180, Jan. 1923.
- Munk, Max M.: The Determination of the Angles of Attack of Zero Lift and of Zero Moment, Based on Munk's Integrals. TN 122, Jan. 1923.
- Munk, Max M.: Elements of the Wing Section Theory and of the Wing Theory. Rept. 191, 1924.

- Section Theory Wing (Cont.)
- Toussaint, A.: Effect of Changing the Mean Camber of an Airfoil Section. TM 252, March 1924.
- Ames, Joseph S.: A Résumé of the Advances in Theoretical Aeronautics Made by Max M. Munk. Rept. 213, 1925.
- Ober, Shatswell: Note on the Katzmayr Effect on Airfoil Drag. TN 214, Feb. 1925.
- Ackeret, J.: Air Forces on Airfoils Moving Faster Than Sound. TM 317, June 1925.
- Betz, A.: A Method for the Direct Determination of Wing-Section Drag. TM 337, Nov. 1925.
- Dupont, M.: Multiplicity of Solution in Aerodynamics. TM 413, May 1927.
- Schrenk, O.: Systematic Investigation of Joukowsky Wing Sections. TM 422, July 1927.
- Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. TM 468, June 1928.
- Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. Part II. TM 469, June 1928.
- Toussaint, A. and Carafoli, E.: Aerodynamic Characteristics of Thin Empirical Profiles and Their Application to the Tail Surfaces and Ailerons of Airplanes. TM 493, Dec. 1928.
- Millikan, Clark B.: An Extended Theory of Thin Airfoils and Its Application to the Biplane Problem. Rept. 362, 1930.
- Repenthin, Walter: Investigation of the Variations in the Velocity of the Air Flow About a Wing Profile. TM 575, July 1930.
- Theodorsen, Theodore: On the Theory of Wing Sections with Particular Reference to the Lift Distribution. Rept. 383, 1931.
- Theodorsen, Theodore: Theory of Wing Sections of Arbitrary Shape. Rept. 411, 1931.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Semicircular Wing Tip on a Biplane in Flight. TN 379, May 1931.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Modified Elliptical Wing Tip on a Biplane in Flight. TN 387, Aug. 1931.

- Cuno, Otto: Experimental Determination of the Thickness of the Boundary Layer Along a Wing Section. TM 679, Aug. 1932.
- Betz, A. and Lotz, J.: Reduction of Wing Lift by the Drag. TM 681, Aug. 1932.
- Rhode, Richard V.: The Pressure Distribution over a Standard and a Modified Navy Elliptical Wing Tip on a Biplane in Flight. TN 433, Oct. 1932.
- Rhode, Richard V.: The Pressure Distribution over a Long Elliptical Wing Tip on a Biplane in Flight. TN 437, Dec. 1932.
- Theodorsen, T. and Garrick, I. E.: General Potential Theory of Arbitrary Wing Sections. Rept. 452, 1933.
- Garrick, I. E.: Determination of the Theoretical Pressure Distribution for Twenty Airfoils. Rept. 465, 1933.
- Betz, A.: Behavior of Vortex Systems. TM 713, June 1933.
- Stuper, J.: An Airfoil Spanning an Open Jet. TM 723, Sept. 1932.
- Anderson, Raymond F.: Charts for Determining the Pitching Moment of Tapered Wings with Sweepback and Twist. TN 483, Dec. 1933.
- Betz, A.: Modification of Wing-Section Shape to Assure a Predetermined Change in Pressure Distribution. TM 767, March 1935.
- Muttray, H.: The Interdependence of Profile Drag and Lift with Joukowski Type and Related Airfoils. TM 768, March 1935.
- Stuper, J.: Contribution to the Problem of Airfoils Spanning a Free Jet. TM 796, June 1936.
- Prandtl, L.: General Considerations on the Flow of Compressible Fluids. TM 805, Oct. 1936.
- Kiel, George: Pressure Distribution on a Wing Section with Slotted Flap in Free Flight Tests. TM 835, Aug. 1937.
- Kaplan, Carl: Compressible Flow About Symmetrical Joukowski Profiles. Rept. 621, 1938.
- Kaplan, Carl: Two-Dimensional Subsonic Compressible Flow Past Elliptic Cylinders. Rept. 624, 1938.
- Jacobs, Eastman N. and Rhode, R. V.:
 Airfoil Section Characteristics as Applied to the Prediction of Air Forces and Their Distribution on Wings. Rept. 631, 1938.

- Section Theory Wing (Cont.)
- Allen, H. Julian: Calculation of the Chordwise Load Distribution over Airfoil Sections with Plain, Split, or Serially-Hinged Trailing-Edge Flaps. Rept. 634, 1938.
- Schrenk, O.: Model Experiments on the Forces and Moments Acting on an End Plate Fitted to a Wing. TM 855, April 1938.
- Mangler, W.: The Lift Distribution of Wings with End Plates. TM 856, April 1938.
- Kaplan, Carl: A Theoretical Study of the Moment of a Body in a Compressible Fluid. Rept. 671, 1939.
- Silverstein, Abe and Joyner, Upshur T.: Experimental Verification of the Theory of Oscillating Airfoils. Rept. 673, 1939.
- Gebelein, H.: Theory of Two-Dimensional Potential Flow About Arbitrary Wing Sections. TM 886, Jan. 1939.
- Kuchemann, D.: Investigation of the Lift Distribution over the Separate Wings of a Biplane. TM 889, March 1939.
- Allen, H. Julian: A Simplified Method for the Calculation of Airfoil Pressure Distribution. TN 708, May 1939.
- Jacobs, Eastman N.: Preliminary Report on Laminar-Flow Airfoils and New Methods Adopted for Airfoil and Boundary-Layer Investigations. ACR (WR L-345), June 1939.
- Robinson, Russell G. and Wright, Ray H.: Estimation of Critical Speeds of Airfoils and Streamline Bodies. ACR (WR L-781), March 1940.
- Ferri, Antonio: Experimental Results with Airfoils Tested in the High-Speed Tunnel at Guidonia. TM 946, July 1940.
- Schmieden, C.: Flow Around Wings Accompanied by Separation of Vortices. TM 961, Dec. 1940.
- Prandtl, L.: Recent Work on Airfoil Theory. TM 962, Dec. 1940.
- Wieghardt, Karl: Chordwise Load Distribution of a Simple Rectangular Wing. TM 963, Dec. 1940.
- Jones, Robert T. and Cohen, Doris: A Graphical Method of Determining Pressure Distribution in Two-Dimensional Flow. Rept. 722, 1941.
- Pistolesi, E.: On the Calculation of Flow Past an Infinite Screen of Thin Airfoils. TM 968, Feb. 1941.

- Kussner, H. G.: General Airfoil Theory. TM 979, June 1941.
- Jones, Robert T.: Correction of the Lifting-Line Theory for the Effect of the Chord. TN 817, July 1941.
- Kaplan, Carl: On the use of Residue Theory for Treating the Subsonic Flow of a Compressible Fluid. Rept. 728, 1942.
- Jacobs, E. N. and Abbott, I. H.: Angles of Zero Lift for Some NACA Low-Drag Airfoils. CB, Feb. 1942.
- Pretsch, J.: Theoretical Solution of Profile Drag. TM 1009, April 1942.
- Lamla, Ernst: On the Symmetrical Potential Flow of Compressible Fluid Past a Circular Cylinder in the Tunnel in the Subcritical Zone. TM 1018, June 1942.
- Keune, F.: Two-Dimensional Potential Flow Past an Ordinary Thick Wing Profile. TM 1023, July 1942.
- Hantzsche, W. and Wendt, H.: The Compressible Potential Flow Past Elliptic Symmetrical Cylinders at Zero Angle of Attack and with No Circulation. TM 1030, Oct. 1942.
- Stack, John: Tests of Airfoils Designed to Delay the Compressibility Burble. Rept. 763, 1943.
- Davis, Wallace F.: Comparison of Various Methods for Computing Drag from Wake Surveys. ARR (WR W-4), Jan. 1943.
- Purser, Paul E. and Gillis, Clarence L.:
 Preliminary Correlation of the Effects
 of Beveled Trailing Edges on the HingeMoment Characteristics of Control
 Surfaces. CB 3E14, May 1943.
- Allen, H. Julian and Vincenti, Walter G.:
 Wall Interference in a Two-DimensionalFlow Wind Tunnel, with Consideration
 of the Effect of Compressibility. Rept.
 782, 1944.
- Garrick, I. E.: On the Plane Potential Flow Past a Lattice of Arbitrary Airfoils. Rept. 788, 1944.
- Kaplan, Carl: The Flow of a Compressible Fluid Past a Circular Arc Profile. Rept. 794, 1944.
- Hildebrand, Francis B.: A Least-Squares Procedure for the Solution of the Lifting-Line Integral Equation. TN 925, Feb. 1944.
- Nitzberg, Gerald E.: A Concise Theoretical Method for Profile-Drag Calculation. ACR 4B05, Feb. 1944.

- Section Theory Wing (Cont.)
- Naiman, Irven: Numerical Evaluation of the ε-Integral Occurring in the Theodorsen Arbitrary Airfoil Potential Theory. ARR L4D27a (WR L-136), April 1944.
- Emmons, Howard W.: The Numerical Solution of Compressible Fluid Flow Problems. TN 932, May 1944.
- Theodorsen, Theodore: Airfoil-Contour Modifications Based on ε-Curve Method of Calculating Pressure Distribution. ARR L4G05 (WR L-135), July 1944.
- Reissner, Eric: On the General Theory of Thin Airfoils for Nonuniform Motion. TN 946, Aug. 1944.
- Von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Aerodynamic Characteristics of the NACA 747A315 and 747A415 Airfoils from Tests in the NACA Two-Dimensional Low-Turbulence Pressure Tunnel. CB L4I25 (WR L-156), Sept. 1944.
- Nitzberg, Gerald E.: The Theoretical Calculation of Airfoil Section Coefficients at Large Reynolds Numbers. ACR 4I12, Oct. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Allen, H. Julian: General Theory of Airfoil Sections Having Arbitrary Shape or Pressure Distribution. Rept. 833, 1945.
- Bergman, Stefan: On Two-Dimensional Flows of Compressible Fluids. TN 972, Aug. 1945.
- Naiman, Irven: Numerical Evaluation by Harmonic Analysis of the ϵ -Function of the Theodorsen Arbitrary-Airfoil Potential Theory. ARR L5H18 (WR L-153), Sept. 1945.
- Kaplan, Carl: Effect of Compressibility at High Subsonic Velocities on the Lifting Force Acting on an Elliptic Cylinder. Rept. 834, 1946.
- Theodorsen, Theodore and Naiman, Irven:
 Pressure Distributions for Representative Airfoils and Related Profiles.
 TN 1016, Feb. 1946.
- Bers, Lipman: Velocity Distribution on Wing Sections of Arbitrary Shape in Compressible Potential Flow. I - Symmetric Flows Obeying the Simplified Density-Speed Relation. TN 1006, April 1946.

- Theodorsen, Theodore: Note on the Theorems of Bjerknes and Crocco. TN 1073, May 1946.
- Bers, Lipman: Velocity Distribution on Wing Sections of Arbitrary Shape in Compressible Potential Flow. II - Subsonic Symmetric Adiabatic Flows. TN 1012, June 1946.
- Ivey, H. Reese; Stickle, George W. and Schuettler, Alberta: Charts for Determining the Characteristics of Sharp-Nose Airfoils in Two-Dimensional Flow at Supersonic Speeds. TN 1143, Jan. 1947.
- Ivey, H. Reese: Notes on the Theoretical Characteristics of Two-Dimensional Supersonic Airfoils. TN 1179, Jan. 1947.
- Schade, Th. and Krienes, K.: The Oscillating Circular Airfoil on the Basis of Potential Theory. TM 1098, Feb. 1947.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Ivey, H. Reese and Bowen, Edward N., Jr.:
 Theoretical Supersonic Lift and Drag
 Characteristics of Symmetrical WedgeShape-Airfoil Sections as Affected by
 Sweepback Outside the Mach Cone.
 TN 1226, March 1947.
- Göthert, B. and Kawalki, K. H.: The Calculation of Compressible Flows with Local Regions of Supersonic Velocity. TM 1114, March 1947.
- Lippisch, A. and Beuschausen, W.: Pressure Distribution Measurements at High Speed and Oblique Incidence of Flow. TM 1115, March 1947.
- Weissinger, J.: The Lift Distribution of Swept-Back Wings. TM 1120, March 1947.
- Frankl, F.: On the Problems of Chaplygin for Mixed Sub- and Supersonic Flows. TM 1155, June 1947.
- Ringleb, F.: Some Aerodynamic Relations for an Airfoil in Oblique Flow. TM 1158, June 1947.
- Moeckel, W. E.: Theoretical Aerodynamic Coefficients of Two-Dimensional Supersonic Biplanes. TN 1316, June 1947.
- Greenberg, J. Mayo: Airfoil in Sinusoidal Motion in a Pulsating Stream. TN 1326, June 1947.
- Perl, W.: Calculation of Compressible Flows Past Aerodynamic Shapes by Use of the Streamline Curvature. TN 1328, June 1947.

- Section Theory Wing (Cont.)
- Loftin, Laurence K., Jr.: Theoretical and Experimental Data for a Number of NACA 6A-Series Airfoil Sections. TN 1368, July 1947.
- Jacobs, W.: Pressure-Distribution Measurements on Unyawed Swept-Back Wings. TM 1164, July 1947.
- Greenberg, J. Mayo: Some Considerations on an Airfoil in an Oscillating Stream. TN 1372, Aug. 1947.
- Perl, W. and Moses, H. E.: Velocity Distributions on Symmetrical Airfoils in Closed Tunnels by Conformal Mapping. TN 1642, June 1948.
- Heaslet, Max. A. and Lomax, Harvard: Two-Dimensional Unsteady Lift Problems in Supersonic Flight. TN 1621, June 1948.
- Perl, W. and Moses, H. E.: Velocity Distributions on Symmetrical Airfoils in Closed Tunnels by Conformal Mapping. TN 1642, June 1948.
- Murray, Harry E.: Comparison With Experiment of Several Methods of Predicting the Lift of Wings in Subsonic Compressible Flow. TN 1739, Oct. 1948.
- Emmons, Howard W.: Flow of a Compressible Fluid Past a Symmetrical Airfoil in a Wind Tunnel and in Free Air. TN 1746, Nov. 1948.
- Graham, Donald J.: The Development of Cambered Airfoil Sections Having Favorable Lift Characteristics at Supercritical Mach Numbers. TN 1771, Dec. 1948.
- Ferri, Antonio: Method for Evaluating From Shadow or Schlieren Photographs the Pressure Drag in Two-Dimensional or Axially Symmetrical Flow Phenomena With Detached Shock. TN 1808, Feb. 1949.
- Nitzberg, Gerald E. and Crandall, Stewart: A Study of Flow Changes Associated with Airfoil Section Drag Rise at Supercritical Speeds. TN 1813, Feb. 1949.
- Schmieden, C. and Kawalki, K. H.: Contribution to the Problem of Flow at High Speed. TM 1233, June 1949.
- Loftin, Laurence K., Jr.: Note of the Accuracy of a Method for Rapidly Calculating the Increments in Velocity About an Airfoil Due to Angle of Attack. TN 1884, June 1949.

- Moses, H. E.: Velocity Distributions on Arbitrary Airfoils in Closed Tunnels by Conformal Mapping. TN 1899, June 1949.
- Costello, George R.: Method of Designing Airfoils with Prescribed Velocity Distributions in Compressible Potential Flows. TN 1913, Aug. 1949.

SECTION VARIABLES (1.2.1.2)

- Norton, F. H.: The Aerodynamic Properties of Thick Aerofoils Suitable for Internal Bracing. Rept. 75, 1920.
- Parker, H. F.: The Parker Variable Camber Wing. Rept. 77, 1920.
- Warner, Edward P.: The Fairing of Airfoil Contours. TN 146, June 1923.
- Aerodynamic Characteristics of Airfoils--III. Rept. 182, 1924.
- LePage, W. L. and Nichols, J. T.: The Effect of Wind Tunnel Turbulence Upon the Forces Measured on Models. TN 191, May 1924.
- Munk, Max M. and Miller, Elton W.: Model Tests With a Systematic Series of 27 Wing Sections at Full Reynolds Number. Rept. 221, 1925.
- Betz, A.: A Method for the Direct Determination of Wing-Section Drag. TM 337, Nov. 1925.
- Schrenk, O.: Systematic Investigation of Joukowsky Wing Sections. TM 422, July 1927.
- Ackeret, J.: Experiments on Airfoils with Trailing Edge Cut Away. TM 431, Sept. 1927.
- Zahm, A. F.; Smith, R. H. and Louden, F. A.: Forces on Elliptic Cylinders in Uniform Air Stream. Rept. 289, 1928.
- DeFoe, George L.: Resistance of Streamline Wires. TN 279, March 1928.
- Diehl, Walter S.: Joint Report on Standardization Tests on N.P.L. R.A.F. 15 Airfoil Model. Rept. 309, 1929.
- Defoe, George L.: A Comparison of the Aerodynamic Characteristics of Three Normal and Three Reflexed Airfoils in the Variable Density Wind Tunnel. TN 388, Aug. 1931.
- Jacobs, Eastman N. and Anderson, Raymond F.: Large-Scale Aerodynamic Characteristics of Airfoils as Tested in the Variable Density Wind Tunnel. Rept. 352, 1933.

- Section Variables Wing (Cont.)
- Jacobs, Eastman N.; Ward, Kenneth E. and Pinkerton, Robert M.: The Characteristics of 78 Related Airfoil Sections From Tests in the Variable-Density Wind Tunnel. Rept. 460, 1933.
- Garrick, I. E.: Determination of the Theoretical Pressure Distribution for Twenty Airfoils. Rept. 465, 1933.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests in the Variable-Density Wind Tunnel of Related Airfoils Having the Maximum Camber Unusually Far Forward. Rept. 537, 1935.
- Jacobs, Eastman N. and Sherman, Albert: Airfoil Section Characteristics as Affected by Variations of the Reynolds Number. Rept. 586, 1937.
- Jacobs, Eastman N. and Rhode, R. V.: Airfoil Section Characteristics as Applied to the Prediction of Air Forces and Their Distribution on Wings. Rept. 631, 1938.
- Goett, Harry J. and Bullivant, W. Kenneth: Tests of NACA 0009, 0012, and 0018 Airfoils in the Full-Scale Tunnel. Rept. 647, 1938.
- Naumann, A.: Pressure Distribution on Wings in Reversed Flow. TM 1011, April 1942.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. X A 30-Percent-Chord Plain Flap With Straight Contour on the NACA 0015 Airfoil. ARR (WR L-366), Sept. 1942.
- Luoma, Arvo A.: Effect of Compressibility on Pressure Distribution Over an Airfoil With a Slotted Frise Aileron. ACR L4G12 (WR L-266), July 1944.
- Cleary, Harold E.: Variation of Peak Pitching-Moment Coefficients for Six Airfoils as Affected by Compressibility. ACR L4H17 (WR L-515), Oct. 1944.
- Kaplan, Carl: Effect of Compressibility at High Subsonic Velocities on the Lifting Force Acting on an Elliptic Cylinder. Rept. 834, 1946.
- Jones, Robert T.: Thin Oblique Airfoils at Supersonic Speed. Rept. 851, 1946.
- Barlow, William H.: Flight Investigation at High Speeds of the Drag of Three Airfoils and a Circular Cylinder Representing Full-Scale Propeller Shanks. Rept. 852, 1946.

- Theodorsen, Theodore and Naiman, Irven: Pressure Distributions for Representative Airfoils and Related Profiles. TN 1016, Feb. 1946.
- Lindsey, W. F.; Daley, Bernard N. and Humphreys, Milton D.: The Flow and Force Characteristics of Supersonic Airfoils at High Subsonic Speeds. TN 1211, March 1947.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: Aerodynamic Characteristics of a Number of Modified NACA Four-Digit-Series Airfoil Sections. TN 1591, June 1948.
- Nitzberg, Gerald E. and Crandall, Stewart: A Study of Flow Changes Associated with Airfoil Section Drag Rise at Supercritical Speeds. TN 1813, Feb. 1949.

Camber (1.2.1.2.1)

- Translated by Paris Office, NACA: The Law Relating to Air Currents. TM 10, March 1921.
- Munk, Max M.: General Theory of Thin Wing Sections. Rept. 142, 1922.
- Toussaint, A.: Effect of Changing the Mean Camber of an Airfoil Section. TM 252, March 1924.
- Toussaint, A.: New Application of Principle of Variable-Camber Airfoil-(Lachassagne system). TM 258, April 1924.
- Weick, Fred E.: Navy Propeller Section Characteristics as Used in Propeller Design. TN 244, Aug. 1926.
- Loew, Gottfried: Contribution to the Systematic Investigation on Joukowsky Profiles. TM 461, April 1928.
- Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. TM 468, June 1928.
- Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. Part II. TM 469, June 1928.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 43 and 63. TN 391, Sept. 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 45 and 65. TN 392, Sept. 1931.

- Camber Wing Sections (Cont.)
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 44 and 64. TN 401, Dec. 1931.
- Stack, John: The NACA High-Speed Wind Tunnel and Tests of Six Propeller Sections. Rept. 463, 1933.
- Lacaine, J.: Wings with Variable Camber and Slots. MP 37, Aug. 1933.
- Flight, Vol. XXV, No. 40, October 5, 1933: The Ugo Antoni Wing. MP 38, Nov. 1933.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Ordinary and Split Flaps on Airfoils of Different Profile. Rept. 554, 1936.
- Jacobs, Eastman N.; Pinkerton, Robert M. and Greenberg, Harry: Tests of Related Forward-Camber Airfoils in the Variable-Density Wind Tunnel. Rept. 610, 1937.
- Soulé, H. A. and Anderson, R. F.: Design Charts Relating to the Stalling of Tapered Wings. Rept. 703, 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Ferri, Antonio: Experimental Results with Airfoils Tested in the High-Speed Tunnel at Guidonia. TM 946, July 1940.
- Jacobs, E. N. and Abbott, I. H.: Angles of Zero Lift for Some NACA Low-Drag Airfoils. CB, Feb. 1942.
- Stack, John: Tests of Airfoils Designed to Delay the Compressibility Burble. Rept. 763, 1943.
- Stack, John; Fedziuk, Henry A. and Cleary, Harold E.: Preliminary Investigation of the Effect of Compressibility on the Maximum Lift Coefficient. ACR, Feb. 1943.
- Davidson, Milton and Turner, Harold R., Jr.: Effects of Mean-Line Loading on the Aerodynamic Characteristics of Some Low-Drag Airfoils. ACR 3I27 (WR L-699), Sept. 1943.
- Tetervin, Neal: Tests in the NACA Two-Dimensional Low-Turbulence Tunnel of Airfoil Sections Designed to Have Small Pitching Moments and High Lift-Drag Ratios. CB 3I13 (WR L-452), Sept. 1943.

- Von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Aerodynamic Characteristics of the NACA 747A315 and 747A415 Airfoils from Tests in the NACA Two-Dimensional Low-Turbulence Pressure Tunnel. CB L4I25 (WR L-156), Sept. 1944.
- Abbott, Ira H.; Von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Cohen, Doris: A Method for Determining the Camber and Twist of a Surface to Support a Given Distribution of Lift. Rept. 826, 1945.
- Graham, Donald J.; Nitzberg, Gerald E. and Olsen, Robert N.: A Systematic Investigation of Pressure Distributions at High Speeds over Five Representative NACA Low-Drag and Conventional Airfoil Sections. Rept. 832, 1945.
- Allen, H. Julian: General Theory of Airfoil Sections Having Arbitrary Shape or Pressure Distribution. Rept. 833, 1945.
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of Six Airfoil Sections for the Wing of the Vega XP2V-1 Airplane TED NO. NACA 231. MR L5I21 (WR L-681), Oct. 1945.
- Stivers, Louis S., Jr. and Rice, Fred J., Jr.: Aerodynamic Characteristics of Four NACA Airfoil Sections Designed for Helicopter Rotor Blades. RB L5K02 (WR L-29), Feb. 1946.
- Von Doenhoff, Albert E.; Stivers, Louis S., Jr. and O'Connor, James M.: Low-Speed Tests of Five NACA 66-Series Airfoils Having Mean Lines Designed to Give High Critical Mach Numbers. TN 1276, May 1947.
- Loftin, Laurence K., Jr.: Theoretical and Experimental Data for a Number of NACA 6A-Series Airfoil Sections. TN 1368, July 1947.
- Graham, Donald J.: High-Speed Tests of an Airfoil Section Cambered to Have Critical Mach Numbers Higher than Those Attainable with a Uniform-Load Mean Line. TN 1396, July 1947.
- Bussmann, K. and Ulrich, A.: Systematic Investigations of the Influence of the Shape of the Profile upon the Position of the Transition Point. TM 1185, Oct. 1947.
- Loftin, Laurence K., Jr. and Poteat, M. Irene: Aerodynamic Characteristics of Several NACA Airfoil Sections at Seven Reynolds Numbers from 0.7 x 10⁶ to 9.0 x 10⁶. RM L8B02, May 1948.

- Camber Wing Sections (Cont.)
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: An Evaluation of the Characteristics of a 10-Percent-Thick NACA 66-Series Airfoil Section with a Special Mean-Camber Line Designed to Produce a High Critical Mach Number. TN 1633, July 1948.
- Lindsey, W. F.; Stevenson, D. B. and Daley, Bernard N.: Aerodynamic Characteristics of 24 NACA 16-Series Airfoils at Mach Numbers Between 0.3 and 0.8. TN 1546, Sept. 1948.
- Graham, Donald J.: The Development of Cambered Airfoil Sections Having Favorable Lift Characteristics at Supercritical Mach Numbers. TN 1771, Dec. 1948.
- Loftin, Laurence K., Jr. and Bursnall, William J.: The Effects of Variations in Reynolds Number Between 3.0 x 106 and 25.0 x 106 upon the Aerodynamic Characteristics of a Number of NACA 6-Series Airfoil Sections. TN 1773, Dec. 1948.
- Loftin, Laurence K., Jr. and Smith, Hamilton A.: Two-Dimensional Aerodynamic Characteristics of 34 Miscellaneous Airfoil Sections. RM L8L08, Jan. 1949.
- Göthert, B.: Airfoil Measurements in the DVL High-Speed Wind Tunnel (2.7-Meter Diameter). TM 1240, June 1949.
- Schaefer, Raymond F.; Loftin, Laurence K., Jr. and Horton, Elmer A.: Two-Dimensional Investigation of Five Related NACA Airfoil Sections Designed for Rotating-Wing Aircraft. TN 1922, July 1949.

Thickness (1.2.1.2.2)

- Munk, Max M.: General Theory of Thin Wing Sections. Rept. 142, 1922.
- Point, Mr.: Commercial Airplanes and Seaplanes. Thick Wings or Thin Wings. All Metal or Mixed Construction. TM 174, Dec. 1922.
- Munk, Max M. and Miller, Elton W.: Model Tests with a Systematic Series of 27 Wing Sections at Full Reynolds Number. Rept. 221, 1925.
- Weick, Fred E.: Navy Propeller Section Characteristics as Used in Propeller Design. TN 244, Aug. 1926.
- Jacobs, Eastman N.: Characteristics of Propeller Sections Tested in the Variable Density Wind Tunnel. Rept. 259, 1927.

- Loew, Gottfried: Contribution to the Systematic Investigation on Joukowsky Profiles. TM 461, April 1928.
- Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. TM 468, June 1928.
- Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. Part II. TM 469, June 1928.
- Jacobs, Eastman N.: Tests of Six Symmetrical Airfoils in the Variable Density Wind Tunnel. TN 385, July 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 43 and 63. TN 391, Sept. 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 45 and 65. TN 392, Sept. 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 44 and 64. TN 401, Dec. 1931.
- Jacobs, Eastman N. and Ward, Kenneth E.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 24. TN 404, Jan. 1932.
- Anderson, Raymond F.: The Aerodynamic Characteristics of Airfoils at Negative Angles of Attack. TN 412, March 1932.
- Jacobs, Eastman N. and Anderson, Raymond F.: Large-Scale Aerodynamic Characteristics of Airfoils as Tested in the Variable-Density Wind Tunnel. Rept. 352, 1933.
- Stack, John: The NACA High-Speed Wind Tunnel and Tests of Six Propeller Sections. Rept. 463, 1933.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Ordinary and Split Flaps on Airfoils of Different Profile. Rept. 554, 1936.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 230. TN 567, May 1936.
- Jacobs, Eastman N.; Pinkerton, Robert M. and Greenberg, Harry: Tests of Related Forward-Camber Airfoils in the Variable-Density Wind Tunnel. Rept. 610, 1937.
- Lindsey, W. F.: Drag of Cylinders of Simple Shapes. Rept. 619, 1938.

- Thickness Wing Sections (Cont.)
- Doetsch, H. and Kramer, M.: Systematic Airfoil Tests in the Large Wind Tunnel of the DVL. TM 852, March 1938.
- Silverstein, Abe and Becker, John V.: Determination of Boundary-Layer Transition on Three Symmetrical Airfoils in the NACA Full-Scale Wind Tunnel. Rept. 637, 1939.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind-Tunnel Investigation of NACA 23012, 23021, and 23030 Airfoils with Various Sizes of Split Flap. Rept. 668, 1939.
- Sherman, Albert: Preliminary Report on the Characteristics of the NACA 4400R Series Airfoils. ACR (WR L-451), March 1939.
- Soulé, H. A. and Anderson, R. F.: Design Charts Relating to the Stalling of Tapered Wings. Rept. 703, 1940.
- Ferri, Antonio: Experimental Results with Airfoils Tested in the High-Speed Tunnel at Guidonia. TM 946, July 1940.
- Bullivant, W. Kenneth: Tests of the NACA 0025 and 0035 Airfoils in the Full-Scale Wind Tunnel. Rept. 708, 1941.
- Harris, Thomas A. and Recant, Isidore G.: Wind-Tunnel Investigation of NACA 23012, 23021, and 23030 Airfoils Equipped with 40-Percent-Chord Double Slotted Flaps. Rept. 723, 1941.
- Greenberg, Harry: Characteristics of NACA 4400R Series Rectangular and Tapered Airfoils, Including the Effect of Split Flaps. ACR (WR L-493), Jan. 1941.
- Jacobs, Eastman N.; Abbott, Ira H. and Davidson, Milton: Investigation of Extreme Leading-Edge Roughness on Thick Low-Drag Airfoils to Indicate Those Critical to Separation. CB (WR L-659), June 1942.
- Stack, John; Fedziuk, Henry A. and Cleary, Harold E.: Preliminary Investigation of the Effect of Compressibility on the Maximum Lift Coefficient. ACR, Feb. 1943.
- Fullmer, Felicien F., Jr.: Wind-Tunnel Investigation of NACA 66(215)-216, 66, 1-212, and 651-212 Airfoils with 0.20-Airfoil-Chord Split Flaps. CB L4G10 (WR L-140), July 1944.
- Braslow, Albert L.: Wind-Tunnel Investigation of Aileron Effectiveness of 0.20-Airfoil-Chord Plain Ailerons of True Airfoil Contour on NACA 652-415, 653-418 and 654-421 Airfoil Sections. CB L4H12 (WR L-178), Aug. 1944.

- Byrne, Robert W.: Experimental Constriction Effects in High-Speed Wind Tunnels. ACR L4L07a (WR L-74), Dec. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Allen, H. Julian: General Theory of Airfoil Sections Having Arbitrary Shape or Pressure Distribution. Rept. 833, 1945.
- White, Roland J. and Klampe, Dean G.:
 Force and Moment Coefficients for a
 Thin Airfoil with Flap and Tab in a
 Form Useful for Stability and Control
 Calculations. TN 960, Jan. 1945.
- Ferri, Antonio: Completed Tabulation in the United States of Tests of 24 Airfoils at High Mach Numbers (Derived from Interrupted Work at Guidonia, Italy in the 1.31- by 1.74-Foot High-Speed Tunnel). ACR L5E21 (WR L-143), June 1945.
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of Six Airfoil Sections for the Wing of the Vega XP2V-1 Airplane TED NO. NACA 231. MR L5I21 (WR L-681), Oct. 1945.
- Perl, W. and Moses, H. E.: Velocity Distributions on Symmetrical Airfoils in Closed Tunnels by Conformal Mapping. ARR E6H23, Sept. 1946.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow Past Thick Airfoil Sections. RM L6J17a, Jan. 1947.
- Ivey, H. Reese and Bowen, Edward N., Jr.:
 Theoretical Supersonic Lift and Drag
 Characteristics of Symmetrical WedgeShape-Airfoil Sections as Affected by
 Sweepback Outside the Mach Cone.
 TN 1226, March 1947.
- Bussman, K. and Ulrich, A.: Systematic Investigations of the Influence of the Shape of the Profile upon the Position of the Transition Point. TM 1185, Oct. 1947.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Cahill, Jones F. and Racisz, Stanley F.:
 Wind-Tunnel Investigation of Seven
 Thin NACA Airfoil Sections to Determine Optimum Double-Slotted-Flap
 Configurations. TN 1545, April 1948.

- Thickness Wing Sections (Cont.)
- Loftin, Laurence K., Jr. and Poteat, M. Irene: Aeordynamic Characteristics of Several NACA Airfoil Sections at Seven Reynolds Numbers from 0.7 x 106 to 9.0 x 106. RM L8B02, May 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: Aerodynamic Characteristics of a Number of Modified NACA Four-Digit-Series Airfoil Sections. TN 1591, June 1948.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow Past Thick Airfoil Sections. TN 1657, July 1948.
- Lindsey, W. F.; Stevenson, D. B. and Daley, Bernard N.: Aerodynamic Characteristics of 24 NACA 16-Series Airfoils at Mach Numbers Between 0.3 and 0.8. TN 1546, Sept. 1948.
- Graham, Donald J.: The Development of Cambered Airfoil Sections Having Favorable Lift Characteristics at Supercritical Mach Numbers. TN 1771, Dec. 1948.
- Loftin, Laurence K., Jr. and Bursnall, William J.: The Effects of Variations in Reynolds Number Between 3.0 x 106 and 25.0 x 106 upon the Aerodynamic Characteristics of a Number of NACA 6-Series Airfoil Sections. TN 1773, Dec. 1948.
- Loftin, Laurence K., Jr. and Smith, Hamilton A.: Two-Dimensional Aerodynamic Characteristics of 34 Miscellaneous Airfoil Sections. RM L8L08, Jan. 1949.
- Margolis, Kenneth: Effect of Thickness on the Lateral Force and Yawing Moment of a Sideslipping Delta Wing at Supersonic Speeds. TN 1798, Jan. 1949.
- Göthert, B.: Airfoil Measurements in the DVL High-Speed Wind Tunnel (2.7-Meter Diameter). TM 1240, June 1949.
- Schaefer, Raymond F.; Loftin, Laurence K., Jr. and Horton, Elmer A.: Two-Dimensional Investigation of Five Related NACA Airfoil Sections Designed for Rotating-Wing Aircraft. TN 1922, July 1949.

Thickness Distribution (1.2.1.2.3)

Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. TM 468, June 1928.

- Toussaint, A. and Carafoli, E.: Choice of Profile for the Wings of an Airplane. Part II. TM 469, June 1928.
- Ward, Kenneth E.: The Effect of Small Variations in Profile of Airfoils. TN 361, Jan. 1931.
- Pinkerton, Robert M.: Effect of Nose Shape on the Characteristics of Symmetrical Airfoils. TN 386, Aug. 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable Density Wind Tunnel. Series 44 and 64. TN 401, Dec. 1931.
- Lindsey, W. F.: Drag of Cylinders of Simple Shapes. Rept. 619, 1938.
- Jacobs, Eastman N.: Preliminary Report on Laminar-Flow Airfoils and New Methods Adopted for Airfoil and Boundary-Layer Investigations. ACR (WR L-345), June 1939.
- Ferri, Antonio: Experimental Results with Airfoils Tested in the High-Speed Tunnel at Guidonia. TM 946, July 1940.
- Jones, Robert T. and Cohen, Doris: A Graphical Method of Determining Pressure Distribution in Two-Dimensional Flow. Rept. 722, 1941.
- Abbott, Ira H. and Turner, Harold R., Jr.: Lift and Drag Tests of Three Airfoil Models with Fowler Flaps Submitted by Consolidated Aircraft Corporation. MR (WR L-677), Dec. 1941.
- Underwood, W. J.: Notes on the Effect of Trailing-Edge Shapes of Low-Drag Airfoils on Profile Drag and the Trim and Balance of Control Surfaces. CB (WR L-450), March 1942.
- Von Doenhoff, Albert E. and Horton, Elmer A.: Preliminary Investigation in the NACA Low-Turbulence Tunnel of Low-Drag Airfoil Sections Suitable for Admitting Air at the Leading Edge. ACR (WR L-694), July 1942.
- Stack, John: Tests of Airfoils Designed to Delay the Compressibility Burble. Rept. 763, 1943.
- Tetervin, Neal: Tests in the NACA Two-Dimensional Low-Turbulence Tunnel of Airfoil Sections Designed to Have Small Pitching Moments and High Lift-Drag Ratios. CB 3I13 (WR L-452), Sept. 1943.
- Crane, Robert M. and Holtzclaw, Ralph W.: Wind-Tunnel Investigation of the Effects of Profile Modifications and Tabs on the Characteristics of Ailerons on a Low-Drag Airfoil. Rept. 803, 1944.

- Thickness Distribution Wing Sections (Cont.)
- Jones, R. T. and Underwood, W. J.: Wind-Tunnel Investigation of a Beveled Aileron Shape Designed to Increase the Useful Deflection Range. MR (WR L-651), April 1944.
- Fullmer, Felicien F., Jr.: Wind-Tunnel Investigation of NACA 66(215)-216, 66, 1-212, and 651-212 Airfoils with 0.20-Airfoil-Chord Split Flaps. CB L4G10 (WR L-140), July 1944.
- Von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Aerodynamic Characteristics of the NACA 747A315 and 747A415 Airfoils from Tests in the NACA Two-Dimensional Low-Turbulence Pressure Tunnel. CB L4I25 (WR L-156), Sept. 1944.
- Purser, Paul E. and Johnson, Harold S.: Effects of Trailing-Edge Modifications on Pitching-Moment Characteristics of Airfoils. CB L4I30 (WR L-664), Sept. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Graham, Donald J.; Nitzberg, Gerald E. and Olsen, Robert N.: A Systematic Investigation of Pressure Distributions at High Speeds over Five Representative NACA Low-Drag and Conventional Airfoil Sections. Rept. 832, 1945.
- Allen, H. Julian: General Theory of Airfoil Sections Having Arbitrary Shape or Pressure Distribution. Rept. 833, 1945.
- Bailey, F. J., Jr.; Mathews, Charles W. and Thompson, Jim Rogers: Drag Measurements at Transonic Speeds on a Freely Falling Body. ACR L5E03, June 1945.
- Stivers, Louis S., Jr. and Rice, Fred J., Jr.: Aerodynamic Characteristics of Four NACA Airfoil Sections Designed for Helicopter Rotor Blades. RB L5K02 (WR L-29), Feb. 1946.
- Goranson, R. Fabian: Flight Tests of Experimental Beveled-Trailing-Edge Frise Ailerons on a Fighter Airplane. TN 1085, July 1946.
- Adams, Richard E. and Silsby, Norman S.: Flight Investigation of the Effect of a Local Change in Wing Contour on Chordwise Pressure Distribution at High Speeds. TN 1152, Sept. 1946.

- Loftin, Laurence K., Jr.: Theoretical and Experimental Data for a Number of NACA 6A-Series Airfoil Sections. TN 1368, July 1947.
- Graham, Donald J.: High-Speed Tests of an Airfoil Section Cambered to Have Critical Mach Numbers Higher than Those Attainable with a Uniform-Load Mean Line. TN 1396, July 1947.
- Perl, W. and Moses, H. E.: Velocity Distributions on Symmetrical Airfoils in Closed Tunnels by Conformal Mapping. TN 1642, June 1948.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Cahill, Jones F. and Racisz, Stanley F.:
 Wind-Tunnel Investigation of Seven
 Thin NACA Airfoil Sections to Determine Optimum Double-Slotted-Flap
 Configurations. TN 1545, April 1948.
- Loftin, Laurence K., Jr. and Poteat, M. Irene: Aerodynamic Characteristics of Several NACA Airfoil Sections at Seven Reynolds Numbers from 0.7 x 106 to 9.0 x 106. RM L8B02, May 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: Aerodynamic Characteristics of a Number of Modified NACA Four-Digit-Series Airfoil Sections. TN 1591, June 1948.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow Past Thick Airfoil Sections. TN 1657, July 1948.
- Graham, Donald J.: The Development of Cambered Airfoil Sections Having Favorable Lift Characteristics at Supercritical Mach Numbers. TN 1771, Dec. 1948.
- Loftin, Laurence K., Jr. and Bursnall, William J.: The Effects of Variations in Reynolds Number Between 3.0 x 106 and 25.0 x 106 upon the Aerodynamic Characteristics of a Number of NACA 6-Series Airfoil Sections. TN 1773, Dec. 1948.
- Loftin, Laurence K., Jr. and Smith, Hamilton A.: Two-Dimensional Aerodynamic Characteristics of 34 Miscellaneous Airfoil Sections. RM L8L08, Jan. 1949.
- Nitzberg, Gerald E. and Crandall, Stewart: A Study of Flow Changes Associated with Airfoil Section Drag Rise at Supercritical Speeds. TN 1813, Feb. 1949.

Wing Sections (Cont.)

Inlets and Exits (1.2.1.2.4)

- Harris, Thomas A. and Recant, Isidore G.: Investigation in the 7- by 10-Foot Wind Tunnel of Ducts for Cooling Radiators Within an Airplane Wing. Rept. 743, 1942.
- Von Doenhoff, Albert E. and Horton, Elmer A.: Preliminary Investigation in the NACA Low-Turbulence Tunnel of Low-Drag Airfoil Sections Suitable for Admitting Air at the Leading Edge. ACR (WR L-694), July 1942.
- Horton, Elmer A. and Woolard, Henry W.: Investigation of a Low-Drag Gun Port in the NACA Two-Dimensional Low-Turbulence Tunnel. CB, Sept. 1942.
- Nelson, W. J. and Czarnecki, K. R.: Wind-Tunnel Investigation of Wing Ducts on a Single-Engine Pursuit Airplane. ARR 3J13 (WR L-407), Oct. 1943.
- McCullough, George B. and Hughes, Kenneth M.: Tests of Gun Ports in a Low-Drag Wing Section for the Consolidated Vultee XA-41 Airplane. CMR, March 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Racisz, Stanley F.: Development of Wing Inlets. ACR L6B18 (WR L-727), March 1946.

Surface Conditions (1.2.1.2.5)

- Wieselsberger, G.: The Effect of the Nature of Surfaces on Resistance, as Tested on Struts. TN 33, Feb. 1921.
- Zahm, A. F.: Influence of Model Surface and Air Flow Texture on Resistance of Aerodynamic Bodies. Rept. 139, 1922.
- Weidinger, Hanns: Drag Measurements on a Junkers Wing Section-Application of the Betz Method to the Results of Comparative Tests Made on a Model and on an Airplane in Flight. TM 428, Sept. 1927.
- Schrenk, O.: Effects of Roughness on Airfoils. TM 430, Sept. 1927.
- Ward, Kenneth E.: The Interference Effects on an Airfoil of a Flat Plate at Mid-span Position. TN 403, Dec. 1931.
- Jacobs, Eastman N.: Airfoil Section Characteristics as Affected by Protuberances. Rept. 446, 1932.

- Ward, Kenneth E.: Characteristics of an Airfoil as Affected by Fabric Sag. TN 428, Aug. 1932.
- Hooker, Ray W.: The Aerodynamic Characteristics of Airfoils as Affected by Surface Roughness. TN 457, April 1933.
- Dearborn, Clinton H.: The Effect of Rivet Heads on the Characteristics of a 6 by 36 Foot Clark Y Metal Airfoil. TN 461, May 1933.
- Schlichting, H.: Experimental Investigation of the Problem of Surface Roughness. TM 823, April 1937.
- Clauser, Milton and Clauser, Francis: The Effect of Curvature on the Transition from Laminar to Turbulent Boundary Layer. TN 613, Sept. 1937.
- Gulick, Beverly G.: Effects of a Simulated Ice Formation on the Aerodynamic Characteristics of an Airfoil. ACR (WR L-292), May 1938.
- Hood, Manley J.: The Effects of Some Common Surface Irregularities on Wing Drag. TN 695, March 1939.
- Rodert, Lewis A. and Jones, Alun R.: Profile-Drag Investigation of an Airplane Wing Equipped with Rubber Inflatable De-Icer. ACR, Dec. 1939.
- Becker, John V.: Boundary-Layer Transition on the NACA 0012 and 23012 Airfoils in the 8-Foot High-Speed Wind Tunnel. ACR (WR L-682), Jan. 1940.
- Wetmore, J. W.; Zalovcik, J. A. and Platt, Robert C.: A Flight Investigation of the Boundary-Layer Characteristics and Profile Drag of the NACA 35-215 Laminar-Flow Airfoil at High Reynolds Numbers. MR (WR L-532), May 1941.
- Jacobs, E. N. and von Doenhoff, A. E.: Formulas for Use in Boundary-Layer Calculations on Low-Drag Wings. ACR (WR L-319), Aug. 1941.
- Jacobs, Eastman N.; Abbott, Ira H. and Davidson, Milton: Investigation of Extreme Leading-Edge Roughness on Thick Low-Drag Airfoils to Indicate Those Critical to Separation. CB (WR L-659), June 1942.
- Abbott, Ira H. and Miller, Ralph B.: Supplement to Advance Confidential Report Tests of a Highly Cambered Low-Drag-Airfoil Section with a Lift-Control Flap. ACR 3D30, April 1943.

- Surface Conditions Wing Sections (Cont.)
- Tetervin, Neal: Tests in the NACA Two-Dimensional Low-Turbulence Tunnel of Airfoil Sections Designed to Have Small Pitching Moments and High Lift-Drag Ratios. CB 3I13 (WR L-452), Sept. 1943.
- Allen, H. Julian: Notes on the Effect of Surface Distortions on the Drag and Critical Mach Number of Airfoils. ACR 3129, Sept. 1943.
- Braslow, Albert L.: Investigation of Surface Irregularities on an NACA 63(420)-416, a = 1.0 Airfoil Section for the Glenn L. Martin Company Design 195. MR (WR L-534), Oct. 1943.
- Davidson, Milton; Houbolt, John C.; Rafel, Norman and Rossman, Carl A.: Preliminary Aerodynamic and Structural Tests Showing the Effect of Compressive Load on the Fairness of a Low-Drag Wing Specimen with Chordwise Hat-Section Stiffeners. ACR 3L02 (WR L-389), Dec. 1943.
- Purser, Paul E. and Riebe, John M.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XV Various
 Contour Modifications of a 0.30-AirfoilChord Plain Flap on an NACA
 66(215)-014 Airfoil. ACR 3L20 (WR
 L-668), Dec. 1943.
- Zalovcik, John A.; Wetmore, J. W. and von Doenhoff, Albert E.: Flight Investigation of Boundary-Layer Control by Suction Slots on an NACA 35-215 Low-Drag Airfoil at High Reynolds Numbers. ACR 4B29 (WR L-521), Feb. 1944.
- Anderson, Joseph L.: Tests of NACA 65(216)-420 and 66(218)-420 Airfoils at High Speeds. CMR (WR A-87), April 1944.
- Zalovcik, John A.: Profile-Drag Coefficients of Conventional and Low-Drag Airfoils as Obtained in Flight. ACR L4E31 (WR L-139), May 1944.
- Von Doenhoff, Albert E. and Nuber, Robert J.: Drag Measurements at High Reynolds Numbers of a 100-Inch-Chord NACA 23016 Practical Construction Wing Section Submitted by Chance Vought Aircraft Company. MR (WR L-752), June 1944.
- Braslow, Albert L.: Investigation of Effects of Various Camouflage Paints and Painting Procedures on the Drag Characteristics of an NACA 65(421)-420, a = 1.0 Airfoil Section. CB L4G17 (WR L-141), July 1944.

- Abbott, Frank T., Jr. and Turner, Harold R., Jr.: The Effects of Roughness at High Reynolds Numbers on the Lift and Drag Characteristics of Three Thick Airfoils. ACR L4H21 (WR L-46), Aug. 1944.
- Zalovcik, John A. and Wood, Clotaire: A
 Flight Investigation of the Effect of
 Surface Roughness on Wing Profile
 Drag with Transition Fixed. ARR
 L4I25 (WR L-159), Sept. 1944.
- Turner, Philip S.; Doran, Jewel and Reinhart, Frank W.: Fairing Compositions for Aircraft Surfaces. TN 958, Nov. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Graham, Donald J.; Nitzberg, Gerald E. and Olsen, Robert N.: A Systematic Investigation of Pressure Distributions at High Speeds over Five Representative NACA Low-Drag and Conventional Airfoil Sections. Rept. 832, 1945.
- Perl, W. and Green, L. J.: The Two-Dimensional Incompressible Potential Flow over Corrugated and Distorted Infinite Surfaces. ARR E5A05 (WR E-38), Jan. 1945.
- Nuber, Robert J. and Rice, Fred J., Jr.:
 Lift Tests of a 0.1536c Thick Douglas
 Airfoil Section of NACA 7-Series Type
 Equipped with a Lateral-Control Device for Use with a Full-Span DoubleSlotted Flap on the C-74 Airplane. MR
 L5C24a (WR L-641), March 1945.
- Zalovcik, John A. and Skoog, Richard B.:
 Flight Investigation of Boundary-Layer
 Transition and Profile Drag of an Experimental Low-Drag Wing Installed
 on a Fighter-Type Airplane. ACR
 L5C08a (WR L-94), April 1945.
- Wood, Clotaire and Zalovcik, John A.:
 Flight Investigation at High Speeds of
 Flow Conditions over an Airplane Wing
 as Indicated by Surface Tufts. CB
 L5E22 (WR L-91), June 1945.
- Zalovcik, John A.: Flight Investigation of Boundary-Layer and Profile-Drag Characteristics of Smooth Wing Sections of a P-47D Airplane. ACR L5H11a (WR L-86), Oct. 1945.
- Quinn, John H., Jr.: Effects of Reynolds Number and Leading-Edge Roughness on Lift and Drag Characteristics of the NACA 653-418, a = 1.0 Airfoil Section. CB L5J04 (WR L-82), Nov. 1945.

- Surface Conditions Wing Sections (Cont.)
- Underwood, William J.; Braslow, Albert L. and Cahill, Jones F.: Two-Dimensional Wind-Tunnel Investigation of 0.20-Airfoil-Chord Plain Ailerons of Different Contour on an NACA 651-210 Airfoil Section. ACR L5F27 (WR L-151), Dec. 1945.
- Loftin, Laurence K., Jr.: Effects of Specific Types of Surface Roughness on Boundary-Layer Transition. ACR L5J29a (WR L-48), Feb. 1946.
- Zalovcik, John A. and Daum, Fred L.:
 Flight Investigation at High Speeds of
 Profile Drag of Wing of a P-47D Airplane Having Production Surfaces Covered with Camouflage Paint. ACR
 L6B21 (WR L-98), March 1946.
- Robinson, Harold L.: High-Speed Investigation of Skin Wrinkles on Two NACA Airfoils. TN 1121, Aug. 1946.
- Adams, Richard E. and Silsby, Norman S.: Flight Investigation of the Effect of a Local Change in Wing Contour on Chordwise Pressure Distribution at High Speeds. TN 1152, Sept. 1946.
- Quinn, John H., Jr.: Summary of Drag Characteristics of Practical-Construction Wing Sections. TN 1151, Jan. 1947.
- Racisz, Stanley F.: Two-Dimensional Wind-Tunnel Investigation of Modified NACA 65(112)-111 Airfoil with 35-Percent-Chord Slotted Flap to Determine Pitching-Moment Characteristics and Effects of Roughness. RM L7B18, Feb. 1947.
- Quinn, John H., Jr.: Drag Tests of an NACA 65(215)-114, a = 1.0 Practical-Construction Airfoil Section Equipped with a 0.295-Airfoil-Chord Slotted Flap. TN 1236, April 1947.
- Toll, Thomas A.; Queijo, M. J. and Brewer, Jack D.: Wind-Tunnel Investigation of the Effects of Surface-Covering Distortion on the Characteristics of a Flap Having Undistorted Contour Maintained for Various Distances Ahead of the Trailing Edge. TN 1296, May 1947.
- Tetervin, Neal: A Review of Boundary-Layer Literature. TN 1384, July 1947.
- Stevenson, David B. and Adler, Alfred A.:
 High-Speed Wind-Tunnel Tests of an
 NACA 0009-64 Airfoil Having a 33.4Percent-Chord Flap with an Overhang
 20.1 Percent of the Flap Chord. TN
 1417, Sept. 1947.
- Riegels, F.: Russian Laminar Flow Airfoils, 3rd Part: Measurements on the Profile No. 2315 BIS with Ava-Nose Flap. TM 1127, Sept. 1947.

- Racisz, Stanley F. and Cahill, Jones F.:
 Wind-Tunnel Investigation of Effects of
 Forward Movements of Transition on
 Section Characteristics of a Low-Drag
 Airfoil with a 0.24-Chord Sealed Plain
 Aileron. TN 1582, May 1948.
- Loftin, Laurence K., Jr. and Poteat, M. Irene: Aerodynamic Characteristics of Several NACA Airfoil Sections at Seven Reynolds Numbers from 0.7 x 106 to 9.0 x 106. RM L8B02, May 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: Aerodynamic Characteristics of a Number of Modified NACA Four-Digit-Series Airfoil Sections. TN 1591, June 1948.
- Racisz, Stanley F. and Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on NACA 655-424 Airfoil with Double Slotted Flap. TN 1631, June 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV - Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Loftin, Laurence K., Jr. and Bursnall, William J.: The Effects of Variations in Reynolds Number Between 3.0 x 106 and 25.0 x 106 upon the Aerodynamic Characteristics of a Number of NACA 6-Series Airfoil Sections. TN 1773, Dec. 1948.
- Von Doenhoff, Albert E. and Horton, Elmer A.: Wind-Tunnel Investigation of NACA 65,3-418 Airfoil Section with Boundary-Layer Control Through a Single Suction Slot Applied to a Plain Flap. RM L9A20, Feb. 1949.
- Schaefer, Raymond F.; Loftin, Laurence K., Jr. and Horton, Elmer A.: Two-Dimensional Investigation of Five Related NACA Airfoil Sections Designed for Rotating-Wing Aircraft. TN 1922, July 1949.

DESIGNATED PROFILES (1.2.1.3)

- Warner, Edward P.: The Choice of Wing Sections for Airplanes. TN 73, Nov. 1921.
- Toussaint, A.: New Application of Principle of Variable-Camber Airfoil-(Lachassagne system). TM 258, April 1924.
- Higgins, George J.: The Comparison of Well-Known and New Wing Sections Tested in the Variable Density Wind Tunnel. TN 219, May 1925.

- Designated Profiles Wing Sections (Cont.)
- Higgins, George J.: The NACA CYH Airfoil Section. TN 240, June 1926.
- Higgins, George J.: The Characteristics of the NACA M-12 Airfoil Section. TN 243, June 1926.
- Briggs, L. J. and Dryden, H. L.: Pressure Distribution over Airfoils at High Speeds. Rept. 255, 1927.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Smith, R. H.: Air Force and Moment for N-20 Wing with Certain Cut-Outs. Rept. 266, 1927.
- Sabatier, J.: Researches on Ailerons and Especially on the Test Loads to Which They Should Be Subjected. TM 398, Feb. 1927.
- Weidinger, Hanns: Drag Measurements on a Junkers Wing Section - Application of the Betz Method to the Results of Comparative Tests Made on a Model and on an Airplane in Flight. TM 428, Sept. 1927.
- Higgins, George J.: The Characteristics of the NACA 97, Clark Y, and NACA-M6 Airfoils with Particular Reference to the Angle of Attack. TN 270, Dec. 1927.
- Diehl, Walter S.: Joint Report on Standardization Tests on N.P.L. R.A.F. 15 Airfoil Model. Rept. 309, 1929.
- Jacobs, Eastman N.: Pressure Distribution on a Slotted R.A.F. 31 Airfoil in the Variable Density Wind Tunnel. TN 308, June 1929.
- Knight, Montgomery and Noyes, Richard
 W.: Wind Tunnel Pressure Distribution
 Tests on a Series of Biplane Wing
 Models. PART I. Effects of Changes
 in Stagger and Gap. TN 310, July 1929.
- Weick, Fred E.: Tests of Four Racing Type Airfoils in the Twenty-Foot Propeller Research Tunnel. TN 317, Sept. 1929.
- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models. PART II. Effects of Changes in Decalage, Dihedral, Sweepback and Overhang. TN 325, Oct. 1929.
- Wenzinger, Carl J. and Loeser, Oscar, Jr.: Wind Tunnel Pressure Distribution Tests on an Airfoil with Trailing Edge Flap. TN 326, Oct. 1929.

- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models. PART III. Effects of Changes in Various Combinations of Stagger, Gap, Sweepback, and Decalage. TN 330, Dec. 1929.
- Jacobs, Eastman N. and Anderson, Raymond F.: Large-Scale Aerodynamic Characteristics of Airfoils as Tested in the Variable Density Wind Tunnel. Rept. 352, 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Douglas Wing Tip on a Biplane in Flight. TN 347, Aug. 1930.
- Defoe, George L.: A Comparison of the Aerodynamic Characteristics of Three Normal and Three Reflexed Airfoils in the Variable Density Wind Tunnel. TN 388, Aug. 1931.
- Anderson, Raymond F.: The Aerodynamic Characteristics of Six Commonly Used Airfoils over a Large Range of Positive and Negative Angles of Attack. TN 397, Nov. 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable Density Wind Tunnel. Series 44 and 64. TN 401, Dec. 1931.
- Weick, Fred E. and Wenzinger, Carl J.: The Characteristics of a Clark Y Wing Model Equipped with Several Forms of Low-Drag Fixed Slots. Rept. 407, 1932.
- Theodorsen, Theodore: Theory of Wing Sections of Arbitrary Shape. Rept. 411, 1932.
- Jacobs, Eastman N. and Ward, Kenneth E.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 24. TN 404, Jan. 1932.
- Jacobs, Eastman N.; Ward, Kenneth E. and Pinkerton, Robert M.: The Characteristics of 78 Related Airfoil Sections from Tests in the Variable-Density Wind Tunnel. Rept. 460, 1933.
- Stack, John: The NACA High-Speed Wind Tunnel and Tests of Six Propeller Sections. Rept. 463, 1933.
- Garrick, I. E.: Determination of the Theoretical Pressure Distribution for Twenty Airfoils. Rept. 465, 1933.
- Hooker, Ray W.: The Aerodynamic Characteristics of Airfoils as Affected by Surface Roughness. TN 457, April 1933.

- Designated Profiles Wing Sections (Cont.)
- Stack, John and von Doenhoff, Albert E.: Tests of 16 Related Airfoils at High Speeds. Rept. 492, 1934.
- Anderson, Raymond F.: Tests of Three Tapered Airfoils Based on the NACA 2200, the NACA-M6, and the Clark Y Sections. TN 487, Jan. 1934.
- Sherman, Albert and Harris, Thomas A.: The Effects of Equal-Pressure Fixed Slots on the Characteristics of a Clark Y Airfoil. TN 507, Oct. 1934.
- Jacobs, Eastman N. and Clay, William C.: Characteristics of the NACA 23012 Airfoil from Tests in the Full-Scale and Variable-Density Tunnels. Rept. 530, 1935.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests in the Variable-Density Wind Tunnel of Related Airfoils Having the Maximum Camber Unusually Far Forward. Rept. 537, 1935.
- Platt, Robert C.: Aerodynamic Characteristics of Wings with Cambered External-Airfoil Flaps, Including Lateral Control with a Full-Span Flap. Rept. 541, 1935.
- Parsons, John F.: Full-Scale Force and Pressure-Distribution Tests on a Tapered U.S.A. 45 Airfoil. TN 521, March 1935.
- Pinkerton, Robert M.: Calculated and Measured Pressure Distributions over the Midspan Section of the NACA 4412 Airfoil. Rept. 563, 1936.
- Platt, Robert C. and Abbott, Ira H.: Aerodynamic Characteristics of NACA 23012 and 23021 Airfoils with 20-Percent-Chord External-Airfoil Flaps of NACA 23012 Section. Rept. 573, 1936.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 230. TN 567, May 1936.
- Pearson, H. A.: A Method of Estimating the Aerodynamic Effects of Ordinary and Split Flaps of Airfoils Similar to the Clark Y. TN 571, June 1936.
- Jacobs, Eastman N. and Sherman, Albert: Airfoil Section Characteristics as Affected by Variations of the Reynolds Number. Rept. 586, 1937.
- Pearson, H. A.: Pressure-Distribution Measurements on an 0-2H Airplane in Flight. Rept. 590, 1937.

- Parsons, John F. and Silverstein, Abe: Full-Scale Span Load Distribution on a Tapered Wing with Split Flaps of Various Spans. TN 591, Feb. 1937.
- Kiel, George: Pressure Distribution on a Wing Section with Slotted Flap in Free Flight Tests. TM 835, Aug. 1937.
- Jacobs, Eastman N. and Rhode, R. V.:
 Airfoil Section Characteristics as
 Applied to the Prediction of Air Forces
 and Their Distribution on Wings. Rept.
 631, 1938.
- Doetsch, H. and Kramer, M.: Systematic Airfoil Tests in the Large Wind Tunnel of the DVL. TM 852, March 1938.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Wenzinger, Carl J.: Wind-Tunnel Tests of a Clark Y Wing Having Split Flaps with Gaps. TN 650, May 1938.
- Wenzinger, Carl J. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Rectangular and Tapered NACA 23012 Wings with Plain Ailerons and Full-Span Split Flaps. TN 661, Aug. 1938.
- House, R. O.: The Effects of Partial-Span Plain Flaps on the Aerodynamic Characteristics of a Rectangular and a Tapered Clark Y Wing. TN 663, Sept. 1938.
- Abbott, Ira H. and Sherman, Albert: Flow Observations with Tufts and Lampblack of the Stalling of Four Typical Airfoil Sections in the NACA Variable-Density Tunnel. TN 672, Oct. 1938.
- Kuethe, Arnold M.: Circulation Measurements About the Tip of an Airfoil During Flight Through a Gust. TN 685, Feb. 1939.
- Wenzinger, Carl J. and Rogallo, Francis M.: Résumé of Air-Load Data on Slats and Flaps. TN 690, March 1939.
- Sherman, Albert: Preliminary Report on the Characteristics of the NACA 4400R Series Airfoils. ACR (WR L-451), March 1939.
- Donely, Philip: An Experimental Investigation of the Normal Acceleration of an Airplane Model in a Gust. TN 706, May 1939.
- Troller, Th. and Rokus, F.: Pressure-Distribution Measurements on a Tapered Wing with a Partial-Span Split Flap in Curved Flight. TN 735, Nov. 1939.

- Designated Profiles Wing Sections (Cont.)
- Delano, James B.: Wind-Tunnel Tests of the NACA 45-125 Airfoil. A Thick Airfoil for High-Speed Airplanes. ACR, Feb. 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Swanson, Robert S. and Schuldenfrei, Marvin J.: Wind-Tunnel Investigation of the Lift Characteristics of an NACA 27-212 Airfoil Equipped with Two Types of Flap. ACR, Sept. 1940.
- Harris, Thomas A. and Purser, Paul E.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Two Sizes of Balanced Split Flap. ACR (WR L-441), Nov. 1940.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23021 Airfoil with a Slotted and a Split Flap. Rept. 718, 1941.
- Harris, Thomas A. and Recant, Isidore G.: Wind-Tunnel Investigation of NACA 23012, 23021, and 23030 Airfoils Equipped with 40-Percent-Chord Double Slotted Flaps. Rept. 723, 1941.
- Wetmore, J. W.; Zalovcik, J. A. and Platt, Robert C.: A Flight Investigation of the Boundary-Layer Characteristics and Profile Drag of the NACA 35-215 Laminar-Flow Airfoil at High Reynolds Numbers. MR (WR L-532), May 1941.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. I Effect of Gap on the Aerodynamic Characteristics of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap. ARR (WR L-377), June 1941.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. II - A Large Aerodynamic Balance of Various Nose Shapes with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-380), Aug. 1941.
- Jacobs, Eastman N.: Preliminary Drag Tests in Flight of Low-Drag Wing on the Curtiss XP-60 Airplane. MR (WR L-745), Dec. 1941.
- Abbott, I. H.: Lift and Drag Characteristics of a Low-Drag Airfoil Model with Slotted Flap Submitted by Curtiss-Wright Corporation. MR (WR L-703), Dec. 1941.

- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23012 Airfoil with a Fixed Slot and a Slotted Flap. Rept. 732, 1942.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with 30-Percent-Chord Venetian-Blind Flaps. Rept. 742, 1942.
- Abbott, Ira H.: Pressure-Distribution Measurements of a Model of a Davis Wing Section with Fowler Flap Submitted by Consolidated Aircraft Corporation. MR (WR L-678), Jan. 1942.
- Abbott, Ira H.: Pressure-Distribution Measurements of Two Airfoil Models with Fowler Flaps Submitted by Consolidated Aircraft Corporation as Alternative Wing Sections of the XB-32 Airplane. MR (WR L-700), Jan. 1942.
- Naumann, A.: Pressure Distribution on Wings in Reversed Flow. TM 1011, April 1942.
- Underwood, William J. and Abbott, Frank T., Jr.: Test of NACA 66, 2-116 a = 0.6 Airfoil Section Fitted with Pressure Balanced and Slotted Flaps for the Wing of the XP-63 Airplane. MR (WR L-701), May 1942.
- Abbott, Ira H.: Tests of Four Models Representing Intermediate Sections of the XB-33 Airplane Including Sections with Slotted Flap and Ailerons. MR (WR L-704), June 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of an NACA Full-Span High-Lift Lateral-Control Combination. I - Section Characteristics, NACA 23012 Airfoil. ARR (WR L-288), July 1942.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. IX Some Analytical Considerations and Experimental Test Results for an Internally Balanced Flap. ARR (WR L-339), July 1942.
- Sears, Richard I. and Gillis, Clarence L.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. VIII A
 Large Aerodynamic Balance of Two
 Nose Shapes Used with a 30-PercentChord Flap on an NACA 0015 Airfoil.
 ARR (WR L-378), July 1942.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. VII A Medium Aerodynamic Balance of Two Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0015 Airfoil. ARR (WR L-448), July 1942.

- Designated Profiles Wing Sections (Cont.)
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. X A 30-Percent-Chord Plain Flap with Straight Contour on the NACA 0015 Airfoil. ARR (WR L-366), Sept. 1942.
- Underwood, William J.: Aerodynamic Characteristics for Internal-Balance and Frise Type Ailerons on an NACA 6 Series Low-Drag Tip Section of the Wing for the XP-63 Airplane. MR (WR L-645), Oct. 1942.
- Purser, Paul E. and Liddell, Robert B.:
 Aerodynamic Characteristics and Flap
 Loads of the Brake-Flap Installation
 on the 0.40-Scale Model of the F4F-3
 Left Wing Panel. MR (WR L-549),
 Oct. 1942.
- Braslow, Albert L.: Investigation of Surface Irregularities on an NACA 63(420)-416, a = 1.0 Airfoil Section for the Glenn L. Martin Company Design 195. MR (WR L-534), Oct. 1943.
- Davidson, Milton and Turner, Harold R., Jr.: Tests of an NACA 66, 2-216, a = 0.6 Airfoil Section with a Slotted and Plain Flap. ACR 3J05, Oct. 1943.
- Purser, Paul E.; Fischel, Jack and Reibe, John M.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with a 0.30-Airfoil-Chord Double Slotted Flap. ARR 3L10 (WR L-469), Dec. 1943.
- Purser, Paul E. and Reibe, John M.: Wind-Tunnel Investigation of Control-Surface Characteristics. XV - Various Contour Modifications of a 0.30-Airfoil-Chord Plain Flap on an NACA 66(215)-014 Airfoil. ACR 3L20 (WR L-668), Dec. 1943.
- Boshar, John: The Determination of Span Load Distribution at High Speeds by Use of High-Speed Wind-Tunnel Section Data. ACR 4B22 (WR L-436), Feb. 1944.
- Anderson, Joseph L.: Tests of NACA 65(216)-420 and 66(218)-420 Airfoils at High Speeds. CMR (WR A-87), April 1944.
- Von Doenhoff, Albert E. and Nuber, Robert J.: Drag Measurements at High Reynolds Numbers of a 100-Inch-Chord NACA 23016 Practical Construction Wing Section Submitted by Chance Vought Aircraft Company. MR (WR L-752), June 1944.
- Fullmer, Felicien F., Jr.: Wind-Tunnel Investigation of NACA 66(215)-216, 66,1-212, and 651-212 Airfoils with 0.20-Airfoil-Chord Split Flaps. CB L4G10 (WR L-140), July 1944.

- Luoma, Arvo A.: Effect of Compressibility on Pressure Distribution over an Airfoil with a Slotted Frise Aileron. ACR L4G12 (WR L-266), July 1944.
- Braslow, Albert L.: Investigation of Effects of Various Camouflage Paints and Painting Procedures on the Drag Characteristics of an NACA 65(421)-420, a = 1.0 Airfoil Section. CB L4G17 (WR L-141), July 1944.
- Quinn, John H., Jr. and Tucker, Warren A.: Scale and Turbulence Effects on the Lift and Drag Characteristics of the NACA 653-418, a = 1.0 Airfoil Section. ACR L4H11 (WR L-138), Aug. 1944.
- Braslow, Albert L.: Wind-Tunnel Investigation of Aileron Effectiveness of 0.20-Airfoil-Chord Plain Ailerons of True Airfoil Contour on NACA 652-415, 653-418 and 654-421 Airfoil Sections. CB L4H12 (WR L-178), Aug. 1944.
- Quinn, John H., Jr.: Tests of the NACA 653-018 Airfoil Section with Boundary-Layer Control by Suction. CB L4H10 (WR L-209), Aug. 1944.
- Tucker, Warren A. and Wallace, Arthur R.: Scale-Effect Tests in a Turbulent Tunnel of the NACA 653-418, a = 1.0 Airfoil Section with 0.20-Airfoil-Chord Split Flap. ACR L4I22 (WR L-128), Sept. 1944.
- Von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Aerodynamic Characteristics of the NACA 747A315 and 747A415 Airfoils from Tests in the NACA Two-Dimensional Low-Turbulence Pressure Tunnel. CB L4I25 (WR L-156), Sept. 1944.
- Cleary, Harold E.: Variation of Peak Pitching-Moment Coefficients for Six Airfoils as Affected by Compressibility. ACR L4H17 (WR L-515), Oct. 1944.
- Cahill, Jones F.: Aerodynamic Tests of an NACA 66(215)-116, a = 0.6 Airfoil with a 0.25c Slotted Flap for the Fleetwings XA-39 Airplane. MR L4K21 (WR L-629), Nov. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Cleary, Harold E.: Effects of Compressibility on Maximum Lift Coefficients for Six Propeller Airfoils. ACR L4L21a (WR L-514), Jan. 1945.
- Spearman, M. Leroy: Wind-Tunnel Investigation of Control-Surface Characteristics. XXIII A 0.25-Airfoil-Chord Flap with Tab Having a Chord Twice the Flap Chord on an NACA 0009 Airfoil. ARR L5G25 (WR L-47), Sept. 1945.

- Designated Profiles Wing Sections (Cont.)
- Zimmey, Charles M. and Lappi, Viola M.: Data for Design of Entrance Vanes from Two-Dimensional Tests of Airfoils in Cascade. ACR L5G18 (WR L-188), Oct. 1945.
- Quinn, John H., Jr.: Effects of Reynolds Number and Leading-Edge Roughness on Lift and Drag Characteristics of the NACA 653-418, a = 1.0 Airfoil Section. CB L5J04 (WR L-82), Nov. 1945.
- Loftin, Lawrence K., Jr. and Rice, Fred J., Jr.: Two-Dimensional Wind-Tunnel Investigation of Two NACA Low-Drag Airfoil Sections Equipped with Slotted Flaps and a Plain NACA Low-Drag Airfoil Section for XF6U-1 Airplane TED No. NACA 2367. MR L5L11 (WR L-746), Jan. 1946.
- Lindsey, W. F.: Effect of Compressibility on the Pressures and Forces Acting on a Modified NACA 65,3-019 Airfoil Having a 0.20-Chord Flap. ACR L5G31a (WR L-76), Jan. 1946.
- Lipson, Stanley: Static-Thrust Investigation of Full-Scale PV-2 Helicopter Rotors Having NACA 0012.6 and 23012.6 Airfoil Sections. TED No. NACA 239. MR L6D24 (WR L-749), May 1946.
- Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on the NACA 653-418, a = 1.0 Airfoil Section with a 0.29-Airfoil-Chord Double Slotted Flap. TN 1071, June 1946.
- Braslow, Albert L.: Two-Dimensional Wind-Tunnel Investigation of Sealed 0.22-Airfoil-Chord Internally Balanced Ailerons of Different Contour on an NACA 65(112)-213 Airfoil. TN 1099, July 1946.
- Serebrisky, Y. M. and Biachuev, S. A.: Wind-Tunnel Investigation of the Horizontal Motion of a Wing Near the Ground. TM 1095, Sept. 1946.
- Perl, W. and Moses, H. E.: Velocity Distributions on Symmetrical Airfoils in Closed Tunnels by Conformal Mapping. ARR E6H23, Sept. 1946.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.
- Quinn, John H., Jr.: Drag Tests of an NACA 65(215)-114, a = 1.0 Practical-Construction Airfoil Section Equipped with a 0.295-Airfoil-Chord Slotted Flap. TN 1236, April 1947.

- Visconti, Fioravante: Wind-Tunnel Investigation of Air Loads over a Double Slotted Flap on the NACA 65(216)-215, a = 0.8 Airfoil Section. RM L7A30, April 1947.
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of the NACA 641-012 Airfoil Equipped with Two Types of Leading-Edge Flap. TN 1277, May 1947.
- Stevenson, David B. and Byrne, Robert W.:

 High-Speed Wind-Tunnel Tests of an
 NACA 16-009 Airfoil Having a 32.9Percent-Chord Flap with an Overhang
 20.7 Percent of the Flap Chord. TN
 1406, Aug. 1947.
- Stevenson, David B. and Adler, Alfred A.:
 High-Speed Wind-Tunnel Tests of an
 NACA 0009-64 Airfoil Having a 33.4Percent-Chord Flap with an Overhang
 20.1 Percent of the Flap Chord. TN
 1417, Sept. 1947.
- Riegels, F.: Russian Laminar Flow Airfoils, 3rd Part: Measurements on the Profile No. 2315 BIS with Ava-Nose Flap. TM 1127, Sept. 1947.
- Racisz, Stanley F.: Investigation of NACA 65(112)A111 (Approx.) Airfoil with 0.35-Chord Slotted Flap at Reynolds Numbers up to 25 Million. TN 1463, Oct. 1947.
- Cahill, Jones F. and Racisz, Stanley F.: Wind-Tunnel Investigation of Seven Thin NACA Airfoil Sections to Determine Optimum Double-Slotted-Flap Configurations. TN 1545, April 1948.
- Brewer, Jack D. and Polhamus, Josephine F.: Wind-Tunnel Investigation of the Boundary Layer on an NACA 0009 Airfoil Having 0.25- and 0.50-Airfoil Chord Plain Sealed Flaps. TN 1574, April 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: Aerodynamic Characteristics of a Number of Modified NACA Four-Digit-Series Airfoil Sections. TN 1591, June 1948.
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of an NACA 64-009 Airfoil Equipped with Two Types of Leading-Edge Flap. TN 1624, June 1948.
- Racisz, Stanley F. and Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on NACA 655-424 Airfoil with Double Slotted Flap. TN 1631, June 1948.

- Designated Profiles Wing Sections (Cont.)
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: An Evaluation of the Characteristics of a 10-Percent-Thick NACA 66-Series Airfoil Section with a Special Mean-Camber Line Designed to Produce a High Critical Mach Number. TN 1633, July 1948.
- Nuber, Robert J. and Needham, James R. Jr.: Exploratory Wind-Tunnel Investigation of the Effectiveness of Area Suction in Eliminating Leading-Edge Separation over an NACA 641A212 Airfoil. TN 1741, Nov. 1948.
- Loftin, Laurence K., Jr. and Smith, Hamilton A .: Two-Dimensional Aerodynamic Characteristics of 34 Miscellaneous Airfoil Sections. RM L8L08, Jan. 1949.
- Von Doenhoff, Albert E. and Horton, Elmer A.: Wind-Tunnel Investigation of NACA 65,3-418 Airfoil Section with Boundary-Layer Control Through a Single Suction Slot Applied to a Plain Flap. RM L9A20, Feb. 1949.
- Dupleich, Paul: Rotation in Free Fall of Rectangular Wings of Elongated Shape. TM 1201, April 1949.
- Nuber, Robert J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of a Symmetrical Airfoil Section with a Sealed Internally Balanced Control Surface and a Leading Tab. RM L9E27, July 1949.

HIGH LIFT DEVICES (1.2.1.4)

- Wolff, E. B.: Preliminary Investigation of the Effect of a Rotating Cylinder in a Wing. TM 307, March 1925.
- Van der Hegge Zijnen, B. G.: Determining the Velocity Distribution in the Boundary Layer of an Airfoil Fitted with a Rotary Cylinder. TM 411, May 1927.
- Wolff, E. B. and Koning, C.: Discussion of the Results of the Boundary-Layer Tests of an Airfoil Fitted with a Rotary Cylinder. TM 424, Aug. 1927.
- Platt, Robert C .: Aerodynamic Characteristics of Wings with Cambered External-Airfoil Flaps, Including Lateral Control with a Full-Span Flap. Rept. 541, 1935.
- Platt, Robert C. and Abbott, Ira H.: Aerodynamic Characteristics of NACA 23012 and 23021 Airfoils with 20-Percent-Chord External-Airfoil Flaps of NACA 23012 Section. Rept. 573, 1936.

- Wenzinger, Carl J.: Pressure Distribution over an NACA 23012 Airfoil with an NACA 23012 External-Airfoil Flap. Rept. 614, 1938.
- Wenzinger, Carl J. and Anderson, Walter B.: Pressure Distribution over Airfoils with Fowler Flaps. Rept. 620, 1938.
- Ames, Milton B., Jr.: Preliminary Data of a Wind-Tunnel Investigation of an NACA 0009 Airfoil with a 0.30c Flap Having a Systematic Variation of Flap Nose Shape and Aerodynamic Overhang. ARR (WR L-301), Aug. 1941.
- Schuldenfrei, Marvin J.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with a Handley Page Slat and Two Flap Arrangements. ARR (WR L-261), Feb. 1942.
- Cahill, Jones F .: Two-Dimensional Wind-Tunnel Investigation of Four Types of High-Lift Flaps on an NACA 65-210 Airfoil Section. TN 1191, Feb. 1947.
- Mendelsohn, Robert A.: Wind-Tunnel Investigation of the Boundary Layer and Wake and Their Relation to Airfoil Characteristics - NACA 651 -012 Airfoil with a True Contour Flap and a Beveled-Trailing-Edge Flap. TN 1304, June 1947.
- McCullough, George B. and Gault, Donald E.: An Experimental Investigation of an NACA 631-012 Airfoil Section with Leading-Edge Suction Slots. TN 1683, Aug. 1948.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I Laminar Flows. TM 1217, April 1949.

Plain Flaps (1.2.1.4.1)

- Higgins, George J. and Jacobs, Eastman N.: The Effect of a Flap and Ailerons on the NACA-M-6 Airfoil Section. Rept. 260, 1927.
- Wenzinger, Carl J. and Loeser, Oscar Jr.: Wind Tunnel Pressure Distribution Tests on an Airfoil with Trailing Edge Flap. TN 326, October 1929.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Pressure Distribution over a Symmetrical Airfoil Section with Trailing Edge Flap. Rept. 360, 1930.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Ordinary and Split Flaps on Airfoils of Different Profile. Rept. 554, 1936.

- Plain Flaps Wing Sections (Cont.)
- Platt, Robert C. and Shortal, Joseph A.: Wind-Tunnel Investigation of Wings with Ordinary Ailerons and Full-Span External-Airfoil Flaps. Rept. 603, 1937.
- Wenzinger, Carl J. and Delano, James B.: Pressure Distribution over an NACA 23012 Airfoil with a Slotted and a Plain Flap. Rept. 633, 1938.
- Allen, H. Julian: Calculation of the Chordwise Load Distribution over Airfoil Sections with Plain, Split, or Serially-Hinged Trailing-Edge Flaps. Rept. 634, 1938.
- Abbott, Ira H. and Greenberg, Harry: Tests in the Variable-Density Wind-Tunnel of the NACA 23012 Airfoil with Plain and Split Flaps. Rept. 661, 1939.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Various Arrangements of Slotted Flaps. Rept. 664, 1939.
- Wenzinger, Carl J. and Gauvain, William E.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with a Slotted Flap and Three Types of Auxiliary Flap. Rept. 679, 1939.
- Wenzinger, Carl J. and Rogallo, Francis M.: Résumé of Air-Load Data on Slats and Flaps. TN 690, March 1939.
- Street, William G. and Ames, Milton B., Jr.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 50-Percent-Chord Plain Flap and Three Tabs. TN 734, Nov. 1939.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with an 80-Percent-Chord Plain Flap and Three Tabs. TN 761, May 1940.
- Ames, Milton B., Jr.: Wind-Tunnel Investigation of Two Airfoils with 25-Percent-Chord Gwinn and Plain Flaps. TN 763, May 1940.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. I Effect of Gap on the Aerodynamic Characteristics of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap. ARR (WR L-377), June 1941.

- Ames, Milton B., Jr.: Preliminary Data of a Wind-Tunnel Investigation of an NACA 0009 Airfoil with a 0.30c Flap Having a Systematic Variation of Flap Nose Shape and Aerodynamic Overhang. ARR (WR L-301), Aug. 1941.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. II - A Large Aerodynamic Balance of Various Nose Shapes with a 30-Percent-Chord on an NACA 0009 Airfoil. ARR (WR L-380), Aug. 1941.
- Abbott, Ira H.: Tests of Four Models Representing Intermediate Sections of the XB-33 Airplane Including Sections with Slotted Flap and Ailerons. MR (WR L-704), June 1942.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. X A 30-Percent-Chord Plain Flap with Straight Contour on the NACA 0015 Airfoil. ARR (WR L-366), Sept. 1942.
- Abbott, Ira H. and Miller, Ralph B.: Tests of a Highly Cambered Low-Drag-Airfoil Section with a Lift-Control Flap. ACR, Dec. 1942.
- Davidson, Milton and Turner, Harold R., Jr.: Tests of an NACA 66, 2-216, a = 0.6 Airfoil Section with a Slotted and Plain Flap. ACR 3J05, Oct. 1943.
- Purser, Paul E. and Riebe, John M.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XV Various
 Contour Modifications of a 0.30-Airfoil-Chord Plain Flap on an NACA
 66(215)-014 Airfoil. ACR 3L20 (WR
 L-668), Dec. 1943.
- Theodorsen, Theodore and Stickle, George W.: Effect of a Trailing-Edge Extension on the Characteristics of a Propeller Section. ACR L4I21 (WR L-637), Sept. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- White, Roland J. and Klampe, Dean G.:
 Force and Moment Coefficients for a
 Thin Airfoil with Flap and Tab in a
 Form Useful for Stability and Control
 Calculations. TN 960, Jan. 1945.
- Heaslet, Max A. and Pardee, Otway O'M.: Critical Mach Numbers of Thin Airfoil Sections with Plain Flaps. ACR A6A30 (WR W-2), April 1946.

48

- Braslow, Albert L.: Two-Dimensional Wind-Tunnel Investigation of Sealed 0.22-Airfoil-Chord Internally Balanced Ailerons of Different Contour on an NACA 65(112)-213 Airfoil. TN 1099, July 1946.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.
- McCullough, George B. and Gault, Donald E.: Boundary Layer and Stalling Characteristics of Two Symmetrical NACA Low Drag Airfoil Sections. RM A6L13, Jan. 1947.
- Toll, Thomas A.; Queijo, M. J. and Brewer, Jack D.: Wind-Tunnel Investigation of the Effects of Surface-Covering Distortion on the Characteristics of a Flap Having Undistorted Contour Maintained for Various Distances Ahead of the Trailing Edge. TN 1296, May 1947.
- Spearman, M. Leroy: Wind-Tunnel Investigation of an NACA 0009 Airfoil with 0.25- and 0.50-Airfoil-Chord Plain Flaps Tested Independently and in Combination. TN 1517, March 1948.
- Brewer, Jack D. and Polhamus, Josephine F.: Wind-Tunnel Investigation of the Boundary Layer on an NACA 0009 Airfoil Having 0.25- and 0.50-Airfoil Chord Plain Sealed Flaps. TN 1574, April 1948.
- Gale, Lawrence J.: Effect of Landing Flaps and Landing Gear on the Spin and Recovery Characteristics of Airplanes. TN 1643, June 1948.
- Cahill, Jones F.: Summary of Section Data on Trailing-Edge High-Lift Devices. RM L8D09, Aug. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Graham, Donald J.: The Development of Cambered Airfoil Sections Having Favorable Lift Characteristics at Supercritical Mach Numbers. TN 1771, Dec. 1948.
- Von Doenhoff, Albert E. and Horton, Elmer A.: Wind-Tunnel Investigation of NACA 65, 3-418 Airfoil Section with Boundary-Layer Control Through a Single Suction Slot Applied to a Plain Flap. RM L9A20, Feb. 1949.

Rose, Leonard M. and Altman, John M.: Low-Speed Experimental Investigation of a Thin, Faired, Double-Wedge Airfoil Section with Nose and Trailing-Edge Flaps. TN 1934, Aug. 1949.

Split Flaps (1.2.1.4.2)

- Bamber, Millard J.: Wind-Tunnel Tests on an Airfoil Equipped with a Split Flap and a Slot. TN 324, Oct. 1929.
- Weick, Fred E. and Thompson, Floyd L.: Preliminary Wind-Tunnel and Flight Tests of a Balanced Split Flap. ACR, Aug. 1934.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Ordinary and Split Flaps on Airfoils of Different Profile. Rept. 554, 1936.
- Jacobs, Eastman N. and Sherman, Albert: Airfoil Section Characteristics as Affected by Variations of the Reynolds Number. Rept. 586, 1937.
- Jacobs, Eastman N.; Pinkerton, Robert M. and Greenberg, Harry: Tests of Related Forward-Camber Airfoils in the Variable-Density Wind-Tunnel. Rept. 610, 1937.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Tapered Wings with Ordinary Ailerons and Partial-Span Split Flaps. Rept. 611, 1937.
- Gauvain, William E.: Wind-Tunnel Tests of a Clark Y Wing with "Maxwell" Leading-Edge Slots. TN 598, April 1937.
- Wenzinger, Carl J.: Pressure Distribution over a Clark Y-H Airfoil Section with a Split Flap. TN 627, Dec. 1937.
- Allen, H. Julian: Calculation of the Chordwise Load Distribution over Airfoil Sections with Plain, Split, or Serially-Hinged Trailing-Edge Flaps. Rept. 634, 1938.
- Doetsch, H. and Kramer, M.: Systematic Airfoil Tests in the Large Wind-Tunnel of the DVL. TM 852, March 1938.
- Abbott, Ira H. and Greenberg, Harry:
 Tests in the Variable-Density WindTunnel of the NACA 23012 Airfoil with
 Plain and Split Flaps. Rept. 661, 1939.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Various Arrangements of Slotted Flaps. Rept. 664, 1939.

- Split Flaps Wing Sections (Cont.)
- Wenzinger, Carl J. and Harris, Thomas A.: Wind-Tunnel Investigation of NACA 23012, 23021, and 23030 Airfoils with Various Sizes of Split Flap. Rept. 668, 1939.
- Wenzinger, Carl J. and Gauvain, William E.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with a Slotted Flap and Three Types of Auxiliary Flap. Rept. 679, 1939.
- Wenzinger, Carl J. and Rogallo, Francis M.: Résumé of Air-Load Data on Slats and Flaps. TN 690, March 1939.
- Troller, Th. and Rokus, F.: Pressure-Distribution Measurements on a Tapered Wing with a Partial-Span Split Flap in Curved Flight. TN 735, Nov. 1939.
- Wenzinger, Carl J. and Harris, Thomas A.: Preliminary Wind-Tunnel Investigation of an NACA 23012 Airfoil with Various Arrangements of Venetian-Blind Flaps. Rept. 689, 1940.
- Swanson, Robert S. and Schuldenfrei, Marvin J.: Wind-Tunnel Investigation of the Lift Characteristics of an NACA 27-212 Airfoil Equipped with Two Types of Flap. ACR, Sept. 1940.
- Harris, Thomas A. and Purser, Paul E.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Two Sizes of Balanced Split Flap. ACR (WR L-441), Nov. 1940.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23021 Airfoil with a Slotted and a Split Flap. Rept. 718, 1941.
- Greenberg, Harry: Characteristics of NACA 4400R Series Rectangular and Tapered Airfoils, Including the Effect of Split Flaps. ACR (WR L-493), Jan. 1941.
- Swanson, Robert S. and Schuldenfrei, Marvin J.: Wind-Tunnel Investigation of an NACA 23021 Airfoil with Two Sizes of Balanced Split Flaps. ACR (WR L-449), Feb. 1941.
- Underwood, W. J.: Tests of Bell XP-63 Low-Drag Wing Model with Split Flap. MR (WR L-769), Sept. 1941.
- Purser, Paul E. and Turner, Thomas R.: Wind-Tunnel Investigation of Perforated Split Flaps for Use as Dive Brakes on a Tapered NACA 23012 Airfoil. ARR (WR L-373), Nov. 1941.
- Ames, Milton B., Jr. and Lowry, John G.: Pressure Distribution over an Airfoil with a Balanced Split Flap. ARR (WR L-264), Dec. 1941.

- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with 30-Percent-Chord Venetian-Blind Flaps. Rept. 742, 1942.
- Pearson, H. A. and Anderson, R. F.: A Brief Study of the Speed Reduction of Overtaking Airplanes by Means of Air Brakes. ACR, May 1942.
- Purser, Paul E. and Liddell, Robert B.:
 Aerodynamic Characteristics and Flap
 Loads of the Brake-Flap Installation
 on the 0.40-Scale Model of the F4F-3
 Left Wing Panel. MR (WR L-549),
 Oct. 1942.
- Purser, Paul E. and Turner, Thomas R.:
 Aerodynamic Characteristics and Flap
 Loads of Perforated Double Split Flaps
 on a Rectangular NACA 23012 Airfoil.
 ARR (WR L-415), Jan. 1943.
- Abbott, Ira H. and Miller, Ralph B.:
 Supplement to Advance Confidential
 Report Tests of a Highly Cambered
 Low-Drag-Airfoil Section with a LiftControl Flap. ACR 3D30, April 1943.
- Fullmer, Felicien F., Jr.: Wind-Tunnel Investigation of NACA 66(215)-216, 66, 1-212, and 651-212 Airfoils with 0.20-Airfoil-Chord Split Flaps. CB L4G10 (WR L-140), July 1944.
- Tucker, Warren A. and Wallace, Arthur R.: Scale-Effect Tests in a Turbulent Tunnel of the NACA 653-418, a = 1.0 Airfoil Section with 0.20-Airfoil-Chord Split Flap. ACR L4I22 (WR L-128), Sept. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Serebrisky, Y. M. and Biachuev, S. A.: Wind-Tunnel Investigation of the Horizontal Motion of a Wing Near the Ground. TM 1095, Sept. 1946.
- McCullough, George B. and Gault, Donald E.: Boundary Layer and Stalling Characteristics of Two Symmetrical NACA Low-Drag Airfoil Sections. RM A6L13, Jan. 1947.
- Letko, William and Feigenbaum, David: Wind-Tunnel Investigation of Split Trailing-Edge Lift and Trim Flaps on a Tapered Wing with 23° Sweepback. TN 1352, July 1947.
- Kruger, W.: Wind-Tunnel Investigation on a Changed Mustang Profile with Nose Flap Force and Pressure Distribution Measurements. TM 1177, Sept. 1947.

- Split Flaps Wing Sections (Cont.)
- Loftin, Laurence K., Jr. and Poteat, M. Irene: Aerodynamic Characteristics of Several NACA Airfoil Sections at Seven Reynolds Numbers from 0.7 x 10⁶ to 9.0 x 10⁶. RM L8B02, May 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: Aerodynamic Characteristics of a Number of Modified NACA Four-Digit-Series Airfoil Sections. TN 1591, June 1948.
- Gale, Lawrence J.: Effect of Landing Flaps and Landing Gear on the Spin and Recovery Characteristics of Airplanes. TN 1643, June 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: An Evaluation of the Characteristics of a 10-Percent-Thick NACA 66-Series Airfoil Section with a Special Mean-Camber Line Designed to Produce a High Critical Mach Number. TN 1633, July 1948.
- Cahill, Jones F.: Summary of Section Data on Trailing-Edge High-Lift Devices. RM L8D09, Aug. 1948.
- Loftin, Laurence K., Jr. and Bursnall, William J.: The Effects of Variations in Reynolds Number Between 3.0 x 10⁶ and 25.0 x 10⁶ upon the Aerodynamic Characteristics of a Number of NACA 6-Series Airfoil Sections. TN 1773, Dec. 1948.
- Gottlieb, Stanley M.: Two-Dimensional Wind-Tunnel Investigation of Two NACA 6-Series Airfoils with Leading-Edge Slats. RM L8K22, Jan. 1949.

Slotted Flaps (1.2.1.4.3)

- Translated by Paris Office, NACA: The Law Relating to Air Currents. TM 10, March 1921.
- Lacaine, J.: Wings with Variable Camber and Slots. MP 37, Aug. 1933.
- Wenzinger, Carl J. and Delano, James B.: Pressure Distribution over an NACA 23012 Airfoil with a Slotted and a Plain Flap. Rept. 633, 1938.
- Wenzinger, Carl J. and Bamber, Millard J.: Wind-Tunnel Tests of Three Lateral-Control Devices in Combination with a Full-Span Slotted Flap on an NACA 23012 Airfoil. TN 659, Aug. 1938.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Various Arrangements of Slotted Flaps. Rept. 664, 1939.

- Wenzinger, Carl J. and Harris, Thomas A.: Wind-Tunnel Investigation of an NACA 23021 Airfoil with Various Arrangements of Slotted Flaps. Rept. 677, 1939.
- Wenzinger, Carl J. and Gauvain, William E.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with a Slotted Flap and Three Types of Auxiliary Flap. Rept. 679, 1939.
- Ruden, P.: Experiments on a Slotted Wing. TM 890, March 1939.
- House, R. O.: Tests of an NACA 23012 Airfoil with a Slotted Deflector Flap. TN 699, April 1939.
- Bamber, M. J.: Wind-Tunnel Tests of Several Forms of Fixed Wing Slot in Combination with a Slotted Flap on an NACA 23012 Airfoil. TN 702, April 1939.
- Harris, Thomas A.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Two Arrangements of a Wide-Chord Slotted Flap. TN 715, June 1939.
- Duschik, Frank: Wind-Tunnel Investigation of an NACA 23021 Airfoil with Two Arrangements of a 40-Percent-Chord Slotted Flap. TN 728, Sept. 1939.
- Wenzinger, Carl J. and Harris, Thomas A.: Preliminary Wind-Tunnel Investigation of an NACA 23012 Airfoil with Various Arrangements of Venetian-Blind Flaps. Rept. 689, 1940.
- Recant, I. G.: Wind-Tunnel Investigation of an NACA 23030 Airfoil with Various Arrangements of Slotted Flaps. TN 755, March 1940.
- Swanson, Robert S. and Schuldenfrei, Marvin J.: Wind-Tunnel Investigation of the Lift Characteristics of an NACA 27-212 Airfoil Equipped with Two Types of Flap. ACR, Sept. 1940.
- Harris, Thomas A. and Purser, Paul E.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Two Sizes of Balanced Split Flap. ACR (WR L-441), Nov. 1940.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23021 Airfoil with a Slotted and a Split Flap. Rept. 718, 1941.
- Harris, Thomas A. and Recant, Isidore G.: Wind-Tunnel Investigation of NACA 23012, 23021, and 23030 Airfoils Equipped with 40-Percent-Chord Double Slotted Flaps. Rept. 723, 1941.

- Slotted Flaps Wing Sections (Cont.)
- Rogallo, F. M.: Aerodynamic Characteristics of a Slot-Lip Aileron and Slotted Flap for Dive Brakes. ACR (WR L-337), April 1941.
- Ames, Milton B., Jr. and Lowry, John G.: Pressure Distribution over an Airfoil with a Balanced Split Flap. ARR (WR L-264), Dec. 1941.
- Abbott, I. H.: Pressure-Distribution Measurements of a Low-Drag Airfoil with Slotted Flap Submitted by Curtiss-Wright Corporation. MR (WR L-676), Dec. 1941.
- Abbott, Ira H. and Turner, Harold R., Jr.: Lift and Drag Tests of Three Airfoil Models with Fowler Flaps Submitted by Consolidated Aircraft Corporation. MR (WR L-677), Dec. 1941.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23012 Airfoil with a Fixed Slot and a Slotted Flap. Rept. 732, 1942.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with 30-Percent-Chord Venetian-Blind Flaps. Rept. 742, 1942.
- Abbott, Ira H.: Pressure-Distribution Measurements of a Model of a Davis Wing Section with Fowler Flap Submitted by Consolidated Aircraft Corporation. MR (WR L-678), Jan. 1942.
- Underwood, William J. and Abbott, Frank T., Jr.: Test of NACA 66, 2-116 a = 0.6 Airfoil Section Fitted with Pressure Balanced and Slotted Flaps for the Wing of the XP-63 Airplane. MR (WR L-701), May 1942.
- Abbott, Ira H.: Tests of Four Models Representing Intermediate Sections of the XB-33 Airplane Including Sections with Slotted Flap and Ailerons. MR (WR L-704), June, 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of an NACA Full-Span High-Lift Lateral-Control Combination. I - Section Characteristics, NACA 23012 Airfoil. ARR (WR L-288), July 1942.
- Holtzclaw, Ralph W. and Erickson, Myles D.: Wind-Tunnel Investigation of Flap, Aileron, and Exterior Bomb Installations on a 24-Inch Constant-Chord North American XB-28 Wing Model. ARR, July 1942.

- Purser, Paul E. and Liddell, Robert B.:
 Aerodynamic Characteristics and Flap
 Loads of the Brake-Flap Installation
 on the 0.40-Scale Model of the F4F-3
 Left Wing Panel. MR (WR L-549),
 Oct. 1942.
- Bogdonoff, Seymour M.: Tests of Two Models Representing Intermediate Inboard and Outboard Wing Sections of the XB-36 Airplane. MR (WR L-662), Jan. 1943.
- Bogdonoff, Seymour M.: Wind-Tunnel Investigation of a Low-Drag Airfoil Section with a Double Slotted Flap. ACR 3I20 (WR L-697), Sept. 1943.
- Abbott, Ira H. and Fullmer, Felicien F., Ir.: Wind-Tunnel Investigation of NACA 63, 4-420 Airfoil with 25-Percent-Chord Slotted Flap. ACR 3I21, Sept. 1943.
- Davidson, Milton and Turner, Harold R., Jr.: Tests of an NACA 66, 2-216, a = 0.6 Airfoil Section with a Slotted and Plain Flap. ACR 3J05, Oct. 1943.
- Purser, Paul E.; Fischel, Jack and Reibe, John M.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with A 0.30-Airfoil-Chord Double Slotted Flap. ARR 3L10 (WR L-469), Dec. 1943.
- Luoma, Arvo A.: Effect of Compressibility on Pressure Distribution over an Airfoil with a Slotted Frise Aileron. ACR L4G12 (WR L-266), July 1944.
- Fischel, Jack and Riebe, John M.: Wind-Tunnel Investigation of an NACA 23021 Airfoil with a 0.32-Airfoil-Chord Double Slotted Flap. ARR L4J05 (WR L-7), Oct. 1944.
- Cahill, Jones F.: Aerodynamic Tests of an NACA 66(215)-116, a = 0.6 Airfoil with a 0.25c Slotted Flap for the Fleetwings XA-39 Airplane. MR L4K21 (WR L-629), Nov. 1944.
- Holtzclaw, Ralph W. and Weisman, Yale: Wind-Tunnel Investigation of the Effects of Slot Shape and Flap Location on the Characteristics of a Low-Drag Airfoil Equipped with a 0.25-Chord Slotted Flap. MR A4L28 (WR A-80), Dec. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Holtzclaw, Ralph W.: Wind-Tunnel Investigation of the Effects of Spoilers on the Characteristics of a Low-Drag Airfoil Equipped with a 0.25-Chord Slotted Flap. MR A5G23 (WR A-92), July 1945.

- Boxer, Emanuel: Wind-Tunnel Investigation of Alternative Propellers Operating Behind Deflected Wing Flaps for the XB-36 Airplane. MR L5K12a (WR L-533), Dec. 1945.
- Loftin, Lawrence K., Jr. and Rice, Fred J., Jr.: Two-Dimensional Wind-Tunnel Investigation of Two NACA Low-Drag Airfoil Sections Equipped with Slotted Flaps and a Plain NACA Low-Drag Airfoil Section for XF6U-1 Airplane TED No. NACA 2367. MR L5L11 (WR L-746), Jan. 1946.
- Cahill, Jones F.: Aerodynamic Data for a Wing Section of the Republic XF-12 Airplane Equipped with a Double Slotted Flap. MR L6A08a (WR L-544), Jan. 1946.
- Racisz, Stanley F.: Development of Wing Inlets. ACR L6B18 (WR L-727), March 1946.
- Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on the NACA 653-418, a = 1.0 Airfoil Section with a 0.29-Airfoil-Chord Double Slotted Flap. TN 1071, June 1946.
- Braslow, Albert L. and Loftin, Laurence K., Jr.: Two-Dimensional Wind-Tunnel Investigation of an Approximately 14-Percent-Thick NACA 66-Series-Type Airfoil Section with a Double Slotted Flap. TN 1110, Aug. 1946.
- Racisz, Stanley F.: Two-Dimensional Wind-Tunnel Investigation of Modified NACA 65(112)-111 Airfoil with 35-Percent-Chord Slotted Flap at Reynolds Numbers up to 25 Million. TN 1463, 1947.
- Cahill, Jones F.: Two-Dimensional Wind-Tunnel Investigation of Four Types of High-Lift Flap on an NACA 65-210 Airfoil Section. TN 1191, Feb. 1947.
- Racisz, Stanley F.: Two Dimensional
 Wind-Tunnel Investigation of Modified
 NACA 65(112)-111 Airfoil with 35Percent-Chord Slotted Flap to Determine Pitching-Moment Characteristics
 and Effects of Roughness. RM L7B18,
 Feb. 1947.
- Visconti, Fioravante: Wind-Tunnel Investigation of Air Loads over a Double Slotted Flap on the NACA (65(216)-215, a = 0.8 Airfoil Section. RM L7A30, April 1947.
- Quinn, John H., Jr.: Tests of the NACA 641A212 Airfoil Section with a Slat, a Double Slotted Flap, and Boundary-Layer Control by Suction. TN 1293, May 1947.

- Schwier, W.: Lift Increase by Blowing Out Air, Tests on Airfoil of 12 Percent Thickness, Using Various Types of Flap. TM 1148, June 1947.
- Racisz, Stanley F.: Two-Dimensional Wind-Tunnel Investigation of Modified NACA 65(112)-111 Airfoil with 35-Percent-Chord Slotted Flap to Determine Optimum Flap Configuration at Reynolds Number of 2.4 Million. RM L7A02, June 1947.
- Quinn, John H., Jr.: Wind-Tunnel Investigation of the NACA 654-421 Airfoil Section with a Double Slotted Flap and Boundary-Layer Control by Suction. TN 1395, July 1947.
- Holtzclaw, Ralph W. and Dods, Jules B., Jr.: Wind-Tunnel Investigation of Drooped Ailerons on a 16-Percent Thick Low-Drag Airfoil. TN 1386, Aug. 1947.
- Racisz, Stanley F.: Investigation of NACA 65(112)A111 (Approx.) Airfoil with 0.35-Chord Slotted Flap at Reynolds Numbers up to 25 Million. TN 1463, Oct. 1947.
- Cahill, Jones F. and Racisz, Stanley F.:
 Wind-Tunnel Investigation of Seven
 Thin NACA Airfoil Sections to Determine Optimum Double-Slotted-Flap
 Configurations. TN 1545, April 1948.
- Racisz, Stanley F. and Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on NACA 655-424 Airfoil with Double Slotted Flap. TN 1631, June 1948.
- Gale, Lawrence J.: Effect of Landing Flaps and Landing Gear on the Spin and Recovery Characteristics of Airplanes. TN 1643, June 1948.
- Cahill, Jones F.: Summary of Section Data on Trailing-Edge High-Lift Devices. RM L8D09, Aug. 1948.
- Braslow, Albert L. and Visconti, Fioravante: Two-Dimensional Wind-Tunnel Investigation of Two NACA 7-Series Type Airfoils Equipped with a Slot-Lip Aileron, Trailing-Edge Frise Aileron, and a Double Slotted Flap. RM L9B23, March 1949.

Leading Edge Flaps (1.2.1.4.4)

McCullough, George B. and Gault, Donald E.: Boundary Layer and Stalling Characteristics of Two Symmetrical NACA Low-Drag Airfoil Sections. RM A6L13, Jan. 1947.

- Leading Edge Flaps Wing Sections (Cont.)
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of the NACA 641-012 Airfoil Equipped with Two Types of Leading-Edge Flap. TN 1277, May 1947.
- Riegels, F.: Russian Laminar Flow Airfoils, 3rd Part: Measurements on the Profile No. 2315 BIS with Ava-Nose Flap. TM 1127, Sept. 1947.
- Kruger W.: Wind-Tunnel Investigation on a Changed Mustang Profile with Nose Flap Force and Pressure Distribution Measurements. TM 1177, Sept. 1947.
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of an NACA 64-009 Airfoil Equipped with Two Types of Leading-Edge Flap. TN 1624, June 1948.
- Rose, Leonard M. and Altman, John M.: Low-Speed Experimental Investigation of a Thin, Faired, Double-Wedge Airfoil Section with Nose and Trailing-Edge Flaps. TN 1934, Aug. 1949.

Slots and Slats (1.2.1.4.5.)

- Editorial from "The Aeroplane" March 8, 1922: Flight Test of the Handley Page Torpedo-Carrying Airplane. TM 82, April 1922.
- Betz, A.: Theory of the Slotted Wing. TN 100, June 1922.
- Jacobs, Eastman N.: Pressure Distribution on a Slotted R.A.F. 31 Airfoil in the Variable Density Wind-Tunnel. TN 308, June 1929.
- Bamber, Millard J.: Wind-Tunnel Tests on an Airfoil Equipped with a Split Flap and a Slot. TN 324, Oct. 1929.
- Weick, Fred E. and Wenzinger, Carl J.: The Characteristics of a Clark Y Wing Model Equipped with Several Forms of Low-Drag Fixed Slots. Rept. 407, 1932.
- Lacaine, J.: Wings with Variable Camber and Slots. MP 37, Aug. 1933.
- Sherman, Albert and Harris, Thomas A.: The Effects of Equal-Pressure Fixed Slots on the Characteristics of a Clark Y Airfoil. TN 507, Oct. 1934.
- Gauvain, William E.: Wind-Tunnel Tests of a Clark Y Wing with "Maxwell" Leading-Edge Slots. TN 598, April 1937.

- Wenzinger, Carl J. and Bamber, Millard J.: Wind-Tunnel Tests of Three Lateral-Control Devices in Combination with a Full-Span Slotted Flap on an NACA 23012 Airfoil. TN 659, Aug. 1938.
- Wenzinger, Carl J. and Rogallo, Francis M.: Résumé of Air-Load Data on Slats and Flaps. TN 690, March 1939.
- Bamber, M. J.: Wind-Tunnel Tests of Several Forms of Fixed Wing Slot in Combination with a Slotted Flap on an NACA 23012 Airfoil. TN 702, April 1939.
- Wenzinger, Carl J. and Harris, Thomas A.: Preliminary Wind-Tunnel Investigation of an NACA 23012 Airfoil with Various Arrangements of Venetian-Blind Flaps. Rept. 689, 1940.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23012 Airfoil with a Fixed Slot and a Slotted Flap. Rept. 732, 1942.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with 30-Percent-Chord Venetian-Blind Flaps. Rept. 742, 1942.
- Schuldenfrei, Marvin J.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with a Handley Page Slat and Two Flap Arrangements. ARR (WR L-261), Feb. 1942.
- Holtzclaw, Ralph W. and Erickson, Myles D.: Wind-Tunnel Investigation of Flap, Aileron, and Exterior Bomb Installations on a 24-Inch Constant-Chord North American XB-28 Wing Model. ARR, July 1942.
- Holtzclaw, Ralph W. and Weisman Yale:
 Wind-Tunnel Investigation of the Effects of Slot Shape and Flap Location on the Characteristics of a Low-Drag Airfoil Equipped with a 0.25-Chord Slotted Flap. CMR A4L28 (WR A-80), Dec. 1944.
- Quinn, John H., Jr.: Tests of the NACA 641A212 Airfoil Section with a Slat, a Double Slotted Flap, and Boundary-Layer Control by Suction. TN 1293, May 1947.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Gottlieb, Stanley M.: Two-Dimensional Wind-Tunnel Investigation of Two NACA 6-Series Airfoils with Leading-Edge Slats. RM L8K22, Jan. 1949.

Wing Sections (Cont.)

CONTROLS (1.2.1.5)

- Wenzinger, Carl J.: Pressure Distribution over an Airfoil Section with a Flap and Tab. Rept. 574, 1936.
- Wenzinger, Carl J. and Bamber, Millard J.: Wind-Tunnel Tests of Three Lateral-Control Devices in Combination with a Full-Span Slotted Flap on an NACA 23012 Airfoil. TN 659, Aug. 1938.
- Abbott, Ira H.: Tests of Four Models Representing Intermediate Sections of the XB-33 Airplane Including Sections with Slotted Flap and Ailerons. MR (WR L-704), June 1942.
- White, Roland J. and Klampe, Dean G.:
 Force and Moment Coefficients for a
 Thin Airfoil with Flap and Tab in a
 Form Useful for Stability and Control
 Calculations. TN 960, Jan. 1945.
- Underwood, William J.; Braslow, Albert L. and Cahill, Jones F.: Two-Dimensional Wind-Tunnel Investigation of 0.20-Airfoil-Chord Plain Ailerons of Different Contour on an NACA 651-210 Airfoil Section. ACR L5F27 (WR L-151), Dec. 1945.
- Braslow, Albert L.: Two-Dimensional Wind-Tunnel Investigation of Low-Drag Vertical-Tail, Horizontal-Tail, and Wing Sections Equipped with Sealed Internally Balanced Control Surfaces. TN 1048, April 1946.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.

Flap Type (1.2.1.5.1.)

- Munk, Max M.: On the Distribution of Lift Along the Span of an Airfoil with Displaced Ailerons. TN 195, June 1924.
- Naatz, H.: Recent Researches in Airship Construction - I. Forces of Flow on a Moving Airship and the Effect of the Control Surfaces. TM 275, Aug. 1924.
- Fairbanks, A. J.: Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. Rept. 254, 1927.
- Higgins, George J. and Jacobs, Eastman N.: The Effect of a Flap and Ailerons on the NACA M-6 Airfoil Section. Rept. 260, 1927.
- Sabatier, J.: Researches on Ailerons and Especially on the Test Loads to Which They Should Be Subjected. TM 398, Feb. 1927.

- Wieselsberger, C. and Asano, T.: Determination of the Air Forces and Moments Produced by the Ailerons of an Airplane. TM 488, Nov. 1928.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Pressure Distribution over a Symmetrical Airfoil Section with Trailing Edge Flap. Rept 360, 1930.
- Platt, Robert C.: Aerodynamic Characteristics of Wings with Cambered External-Airfoil Flaps, Including Lateral Control with a Full-Span Flap. Rept. 541, 1935.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of the Aerodynamic Balancing of Upper-Surface Ailerons and Split Flaps. Rept. 549, 1935.
- Platt, Robert C. and Shortal, Joseph A.: Wind-Tunnel Investigation of Wings with Ordinary Ailerons and Full-Span External-Airfoil Flaps. Rept 603, 1937.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Tapered Wings with Ordinary Ailerons and Partial-Span Split Flaps. Rept. 611, 1937.
- Pearson, H. A.: Theoretical Span Loading and Moments of Tapered Wings Produced by Aileron Deflection. TN 589, Jan. 1937.
- Street, William G. and Ames, Milton B., Jr.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 50-Percent-Chord Plain Flap and Three Tabs. TN 734, Nov. 1939.
- Donely, Philip and Shufflebarger, C. C.: Tests of a Gust-Alleviating Flap in the Gust Tunnel. TN 745, Jan. 1940.
- Pearson, Henry A.: A Study of Unsymmetrical-Loading Conditions. TN 757, April 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with an 80-Percent-Chord Plain Flap and Three Tabs. TN 761, May 1940.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. I Effect of Gap on the Aerodynamic Characteristics of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap. ARR (WR L-377), June 1941.

- Flap Type Controls Wing Sections (Cont.)
- Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. III A Small Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-301), Aug. 1941.
- Sears, Richard I. and Hoggard, H. Page,
 Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. II A
 Large Aerodynamic Balance of Various
 Nose Shapes with a 30-Percent-Chord
 Flap on an NACA 0009 Airfoil. ARR
 (WR L-380), Aug. 1941.
- Ames, Milton B., Jr. and Eastman, Donald R., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. IV A Medium Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-355), Sept. 1941.
- Underwood, W. J.: Notes on the Effect of Trailing-Edge Shapes of Low-Drag Airfoils on Profile Drag and the Trim and Balance of Control Surfaces. CB (WR L-450), March 1942.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. VI A 30Percent-Chord Plain Flap on the
 NACA 0015 Airfoil. ARR (WR L-454),
 June 1942.
- Jones, Robert T. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. V The Use of a Beveled Trailing Edge to Reduce the Hinge Moment of a Control Surface. ARR (WR L-464), March 1942.
- Holtzclaw, Ralph W. and Erickson, Myles D.: Wind-Tunnel Investigation of Flap, Aileron, and Exterior Bomb Installations on a 24-Inch Constant-Chord North American XB-28 Wing Model. ARR, July 1942.
- Rogallo, F. M. and Lowry, John G.:
 Wind-Tunnel Investigation of an NACA
 Full-Span High-Lift Lateral-Control
 Combination. I Section Characteristics, NACA 23012 Airfoil. ARR (WR
 L-288), July 1942.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. IX Some Analytical Considerations and Experimental Test Results for an Internally Balanced Flap. ARR (WR L-339), July 1942.

- Sears, Richard I. and Gillis, Clarence L.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. VIII A
 Large Aerodynamic Balance of Two
 Nose Shapes Used with a 30-PercentChord Flap on an NACA 0015 Airfoil.
 ARR (WR L-378), July 1942.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. VII - A Medium Aerodynamic Balance of Two Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0015 Airfoil. ARR (WR L-448), July 1942.
- Purser, Paul E. and Liddell, Robert B.:
 Aerodynamic Characteristics and Flap
 Loads of the Brake-Flap Installation
 on the 0.40-Scale Model of the F4F-3
 Left Wing Panel. MR (WR L-549),
 Oct. 1942.
- Underwood, William J.: Aerodynamic Characteristics for Internal-Balance and Frise Type Ailerons on an NACA 6-Series Low-Drag Tip Section of the Wing for the XP-63 Airplane. MR (WR L-645), Oct. 1942.
- Pearson, Henry A. and Smull, Leland K.: Control-Motion Studies of the PBM-3 Flying Boat in Abrupt Pull-Ups. MR (WR L-577), Nov. 1942.
- Abbott, Ira H. and Miller, Ralph B.: Tests of a Highly Cambered Low-Drag-Airfoil Section with a Lift-Control Flap. ACR, Dec. 1942.
- Sears, Richard I. and Hoggard, H. Page,
 Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XI Various Large Overhang and InternalType Aerodynamic Balances for a
 Straight-Contour Flap on the NACA
 0015 Airfoil. ARR (WR L-447),
 Jan. 1943.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XII Various Cover-Plate Alinements on the NACA 0015 Airfoil with a 30-Percent-Chord Flap and Large Sealed Internal Balance. ARR (WR L-511), Jan 1943.
- Abbott, Frank T., Jr. and Underwood, William J.: Wind-Tunnel Investigation of Profile Drag and Lift of an Intermediate Wing Section of the XP-51 Airplane with Beveled Trailing-Edge and Contour Ailerons. MR (WR L-615), Jan. 1943.
- Bogdonoff, Seymour M.: Tests of Two Models Representing Intermediate Inboard and Outboard Wing Sections of the XB-36 Airplane. MR (WR L-662), Jan. 1943.

- Flap Type Controls Wing Sections (Cont.)
- Purser, Paul E. and Gillis, Clarence L.:
 Preliminary Correlation of the Effects
 of Beveled Trailing Edges on the
 Hinge-Moment Characteristics of
 Control Surfaces. CB 3E14, May 1943.
- Sears, Richard I. and Purser, Paul E.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XIV NACA
 0009 Airfoil with a 20-Percent-Chord
 Double Plain Flap. ARR 3F29 (WR
 L-290), June 1943.
- Letko, W.; Denaci, H. G. and Freed, C.: Wind-Tunnel Tests of Ailerons at Various Speeds. I Ailerons of 0.20 Airfoil Chord and True Contour with 0.35 Aileron-Chord Extreme Blunt Nose Balance on the NACA 66,2-216 Airfoil. ACR 3F11 (WR L-431), June 1943.
- Denaci, H. G. and Bird, J. D.: Wind-Tunnel Tests of Ailerons at Various Speeds. II Ailerons of 0.20 Airfoil Chord and True Contour with 0.60 Aileron-Chord Sealed Internal Balance on the NACA 66,2-216 Airfoil. ACR 3F18 (WR L-432), June 1943.
- Gillis, Clarence L. and Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics.
 XIII Various Flap Overhangs Used with a 30-Percent-Chord Flap on an NACA 66-009 Airfoil. ACR 3G20 (WR L-314), July 1943.
- Letko, W.; Hollingworth, T. A. and Anderson, R. A.: Wind-Tunnel Tests of Ailerons at Various Speeds. IV Ailerons of 0.20 Airfoil Chord and True Contour with 0.35 Aileron-Chord Extreme Blunt-Nose Balance on the NACA 23012 Airfoil. ACR 3H28 (WR L-433), Aug. 1943.
- Letko, W. and Kemp, W. B.: Wind-Tunnel Tests of Ailerons at Various Speeds. III Ailerons of 0.20 Airfoil Chord and True Contour with 0.35-Aileron-Chord Frise Balance on the NACA 23012 Airfoil. ACR 3I14 (WR L-325), Sept. 1943.
- Davidson, Milton and Turner, Harold R., Jr.: Tests of an NACA 66, 2-216, a = 0.6 Airfoil Section with a Slotted and Plain Flap. ACR 3J05, Oct. 1943.
- Letko, W. and Denaci, H. G.: Wind Tunnel Tests of Ailerons at Various Speeds. V - Pressure Distributions over the NACA 66,2-216 and NACA 23012 Airfoils with Various Balances on 0.20-Chord Ailerons. ACR 3K05 (WR L-434), Nov. 1943.

- Bird, J.D. and Mendelsohn, Robert A.: Wind-Tunnel Tests of a Piston-Type Control Booster on an Airfoil and Aileron Model. RB 3K15 (WR L-494), Nov. 1943.
- Sears, Richard I.: Wind-Tunnel Data on the Aerodynamic Characteristics of Airplane Control Surfaces. ACR 3L08 (WR L-663), Dec. 1943.
- Purser, Paul E. and Riebe, John M.: Wind-Tunnel Investigation of Control-Surface Characteristics. XV - Various Contour Modifications of a 0.30-Airfoil-Chord Plain Flap on an NACA 66(215)-014 Airfoil. ACR 3L20 (WR L-668), Dec. 1943.
- Crane, Robert M. and Holtzclaw, Ralph W.: Wind-Tunnel Investigation of the Effects of Profile Modifications and Tabs on the Characteristics of Ailerons on a Low-Drag Airfoil. Rept. 803, 1944.
- Rogallo, F. M.: Collection of Balanced-Aileron Test Data. ACR 4A11 (WR 419), Jan. 1944.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XVIII A
 Linked Overhang Aerodynamic Balance.
 ACR 4B28 (WR L-350), Feb. 1944.
- Hoggard, H. Page, Jr. and Bulloch,
 Marjorie E.: Wind-Tunnel Investigation of Control-Surface Characteristics.
 XVI Pressure Distribution over an NACA 0009 Airfoil with 0.30-Airfoil-Chord Beveled-Trailing-Edge Flaps.
 ARR L4D03 (WR L-205), April 1944.
- Jones, R. T. and Underwood, W. J.: Wind-Tunnel Investigation of a Beveled Aileron Shape Designed to Increase the Useful Deflection Range. MR (WR L-651), April 1944.
- Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVII Beveled-Trailing-Edge Flaps of 0.20, 0.30, and 0.40 Airfoil Chord on an NACA 0009 Airfoil. ACR L4D12 (WR L-666), April 1944.
- Purser, Paul E. and Toll, Thomas A.: Analysis of Available Data on Control Surfaces Having Plain-Overhang and Frise Balances. ACR L4E13 (WR L-665), May 1944.
- Liddell, Robert B.: Wind-Tunnel Investigation of Control-Surface Characteristics. XIX A Double Flap with an Overhang and an Internal Aerodynamic Balance. ACR L4F23 (WR L-215), June 1944.

- Flap Type Controls Wing Sections (Cont.)
- Luoma, Arvo A.: Effect of Compressibility on Pressure Distribution over an Airfoil with a Slotted Frise Aileron. ACR L4G12 (WR L-266), July 1944.
- Braslow, Albert L.: Wind-Tunnel Investigation of Aileron Effectiveness of 0.20-Airfoil-Chord Plain Ailerons of True Airfoil Contour on NACA 652-415, 653-418 and 654-421 Airfoil Sections. CB L4H12 (WR L-178), Aug. 1944.
- Purser, Paul E. and Johnson, Harold S.: Effects of Trailing-Edge Modifications on Pitching-Moment Characteristics of Airfoils. CB L4I30 (WR L-664), Sept. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Bird, J. D.: Wind-Tunnel Tests of a Blunt-Nose Aileron with Beveled Trailing Edge on an NACA 66(215)-216 Airfoil with Several Modifications of Aileron Nose and Adjacent Airfoil Contour. ACR L5B10 (WR L-105), Feb. 1945.
- Riebe, John M. and Church, Oleta: Wind-Tunnel Investigation of Control-Surface Characteristics. XXI - Medium and Large Aerodynamic Balances of Two Nose Shapes and a Plain Overhang Used with a 0.40-Airfoil-Chord Flap on an NACA 0009 Airfoil. ARR L5C01 (WR L-175), March 1945.
- Nuber, Robert J. and Rice, Fred J., Jr.:
 Lift Tests of a 0.1536c Thick Douglas
 Airfoil Section of NACA 7-Series Type
 Equipped with a Lateral-Control Device
 for use with a Full-Span Double-Slotted
 Flap on the C-74 Airplane. MR L5C24a
 (WR L-641), March 1945.
- Crane, Robert M.: Computation of Hinge-Moment Characteristics of Horizontal Tails from Section Data. CB 5B05 (WR A-11), April 1945.
- Purser, Paul E. and McKinney, Elizabeth G.: Comparison of Pitching Moments Produced by Plain Flaps and by Spoilers and Some Aerodynamic Characteristics of an NACA 23012 Airfoil with Various Types of Aileron. ACR L5C24a (WR L-124), April 1945.
- Riebe, John M. and McKinney, Elizabeth G.: Wind-Tunnel Investigation of Control-Surface Characteristics.

 XXII Medium and Large Aerodynamic Balances of Two Nose Shapes and a Plain Overhang Used with a 0.20-Airfoil-Chord Flap on an NACA 0009 Airfoil. ARR L5F06 (WR L-196), June 1945.

- Bird, J.D.: Effect of Leakage Past Aileron Nose on Aerodynamic Characteristics of Plain and Internally Balanced Ailerons on NACA 66(215)-216, a = 1.0 Airfoil. ACR L5F13a (WR L-172), July 1945.
- Fischel, Jack: Hinge Moments of Sealed-Internal-Balance Arrangements for Control Surfaces. II Experimental Investigation of Fabric Seals in the Presence of a Thin-Plate Overhang. ARR L5F30a (WR L-52), Aug. 1945.
- Spearman, M. Leroy: Wind-Tunnel Investigation of Control-Surface Characteristics. XXIII A 0.25-Airfoil-Chord Flap with Tab Having a Chord Twice the Flap Chord on an NACA 0009 Airfoil. ARR L5G25 (WR L-47), Sept. 1945.
- Crandall, Stewart M. and Murray, Harry E.: Analysis of Available Data on the Effects of Tabs on Control-Surface Hinge Moments. TN 1049, May 1946.
- Luoma, Arvo A.: Effect of Compressibility on Section Characteristics of an Airfoil with a Round-Nose Slotted Frise Aileron. TN 1075, May 1946.
- Braslow, Albert L.: Two-Dimensional Wind-Tunnel Investigation of Sealed 0.22-Airfoil-Chord Internally Balanced Ailerons of Different Contour on an NACA 65(112)-213 Airfoil. TN 1099, July 1946.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.
- Purser, Paul E. and Cook, Charles B.: Collection and Analysis of Hinge-Moment Data on Control-Surface Tabs. TN 1113, April 1947.
- Letko, William and Feigenbaum, David: Wind-Tunnel Investigation of Split Trailing-Edge Lift and Trim Flaps on a Tapered Wing with 23° Sweepback. TN 1352, July 1947.
- Holtzclaw, Ralph W. and Dods, Jules B., Jr.: Wind-Tunnel Investigation of Drooped Ailerons on a 16-Percent-Thick Low-Drag Airfoil. TN 1386, Aug. 1947.
- Brewer, Jack D. and Queijo, M. J.: Wind-Tunnel Investigation of the Effect of Tab Balance on Tab and Control-Surface Characteristics. TN 1403, Aug. 1947.

- Flap Type Controls Wing Sections (Cont.)
- Stevenson, David B. and Byrne, Robert W.: High-Speed Wind-Tunnel Tests of an NACA 16-009 Airfoil Having a 32.9-Percent Chord Flap with an Overhang 20.7 Percent of the Flap Chord. TN 1406, Aug. 1947.
- Stevenson, David B. and Adler, Alfred A.:
 High-Speed Wind-Tunnel Tests of an
 NACA 0009-64 Airfoil Having a 33.4Percent-Chord Flap with an Overhang
 20.1 Percent of the Flap Chord. TN
 1417, Sept. 1947.
- Spearman, M. Leroy: Wind-Tunnel Investigation of an NACA 0009 Airfoil with 0.25- and 0.50-Airfoil-Chord Plain Flaps Tested Independently and in Combination. TN 1517, March 1948.
- Brewer, Jack D. and Polhamus, Josephine F.: Wind-Tunnel Investigation of the Boundary Layer on an NACA 0009 Airfoil Having 0.25- and 0.50-Airfoil Chord Plain Sealed Flaps. TN 1574, April 1948.
- Racisz, Stanley F. and Cahill, Jones F.: Wind-Tunnel Investigation of Effects of Forward Movements of Transition on Section Characteristics of a Low-Drag Airfoil with a 0.24-Chord Sealed Plain Aileron. TN 1582, May 1948.
- Visconti, Fioravante: Investigation of an Approximately 0.178-Chord-Thick NACA 6-Series-Type Airfoil Section Equipped with Sealed Internally Balanced 0.20-Chord Ailerons and with a 0.05-Chord Tab. TN 1590, May 1948.
- Tucker, Warren A.: Notes on Geared Tabs at Supersonic Speeds. RM L7L04, July 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Luoma, Arvo A.: An Investigation of the Section Characteristics of Plain Unsealed Ailerons on an NACA 66,1-115 Airfoil Section in the Langley 8-Foot High-Speed Tunnel. TN 1596, Jan. 1949.
- Braslow, Albert L. and Visconti, Fioravante: Two-Dimensional Wind-Tunnel Investigation of Two NACA 7-Series Type Airfoils Equipped with a Slot-Lip Aileron, Trailing-Edge Frise Aileron, and a Double Slotted Flap. RM L9B23, March 1949.
- Fischel, Jack and Ivey, Margaret F.: Collection of Test Data for Lateral Control with Full-Span Flaps. TN 1404, April 1948.

Nuber, Robert J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of a Symmetrical Airfoil Section with a Sealed Internally Balanced Control Surface and a Leading Tab. RM L9E27, July 1949.

Spoilers (1.2.1.5.2)

- Weick, Fred E. and Shortal, Joseph A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. V Spoilers
 and Ailerons on Rectangular Wings.
 Rept. 439, 1932.
- Hubner, Walter and Pleines, Wilhelm: The D.V.L. Gliding-Angle Control (W. Hubner Design). TM 697, Jan. 1933.
- Rogallo, F. M.: Aerodynamic Characteristics of a Slot-Lip Aileron and Slotted Flap for Dive Brakes. ACR (WR L-337), April 1941.
- Nuber, Robert J. and Rice, Fred J., Jr.:
 Lift Tests of a 0.1536c Thick Douglas
 Airfoil Section of NACA 7-Series
 Type Equipped with a Lateral-Control
 Device for Use with a Full-Span
 Double-Slotted Flap on the C-74 Airplane. MR L5C24a (WR L-641),
 March 1945.
- Underwood, William J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of Spoiler Aileron Flap Model for the Hughes XF-11 Airplane. MR L5C29 (WR L-644), April 1945.
- Purser, Paul E. and McKinney, Elizabeth G.: Comparison of Pitching Moments Produced by Plain Flaps and by Spoilers and Some Aerodynamic Characteristics of an NACA 23012 Airfoil with Various Types of Aileron. ACR L5C24a (WR L-124), April 1945.
- Holtzclaw, Ralph W.: Wind-Tunnel Investigation of the Effects of Spoilers on the Characteristics of a Low-Drag Airfoil Equipped with a 0.25-Chord Slotted Flap. CMR A5G23 (WR A-92), July 1945.
- Holtzclaw, Ralph W. and Dods, Jules B., Jr.: Wind-Tunnel Investigation of Drooped Ailerons on a 16-Percent-Thick Low-Drag Airfoil. TN 1386, Aug. 1947.
- Fischel, Jack and Ivey, Margaret F.: Collection of Test Data for Lateral Control with Full-Span Flaps. TN 1404, April 1948.

- Spailers Wing Sections (Cont.)
- Braslow, Albert L. and Visconti, Fioravante: Two-Dimensional Wind-Tunnel Investigation of Two NACA 7-Series Type Airfoils Equipped with a Slot-Lip Aileron, Trailing-Edge Frise Aileron, and a Double Slotted Flap. RM L9B23, March 1949.

BOUNDARY LAYER (1.2.1.6)

- Ober, Shatswell: Note on the Katzmayr Effect on Airfoil Drag. TN 214, Feb. 1925.
- Wolff, E.B.: Preliminary Investigation of the Effect of a Rotating Cylinder in a Wing. TM 307, March 1925.
- Ackeret, J.: Removing Boundary Layer by Suction. TM 395, Jan. 1926.
- Ackeret, J.; Betz, A. and Schrenk, O.: Experiments with an Airfoil from Which the Boundary Layer is Removed by Suction. TM 374, Aug. 1926.
- Van der Hegge Zijnen, B. G.: Determining the Velocity Distribution in the Boundary Layer of an Airfoil Fitted with a Rotary Cylinder. TM 411, May 1927.
- Dupont, M.: Multiplicity of Solution in Aerodynamics. TM 413, May 1927.
- Wolff, E. B. and Koning, C.: Discussion of the Results of the Boundary-Layer Tests of an Airfoil Fitted with a Rotary Cylinder. TM 424, Aug. 1927.
- Reid, E. G. and Bamber, M. J.: Preliminary Investigation on Boundary Layer Control by Means of Suction and Pressure with the USA 27 Airfoil. TN 286, May 1928.
- Knight, Montgomery and Bamber, Millard J.: Wind Tunnel Tests on Airfoil Boundary Layer Control Using a Backward Opening Slot. TN 323, Oct. 1929.
- Hansen, M.: Velocity Distribution in the Boundary Layer of a Submerged Plate. TM 585, Oct. 1930.
- Bamber, Millard J.: Wind-Tunnel Tests on Airfoil Boundary Layer Control Using a Backward-Opening Slot. Rept. 385, 1931.
- Stack, John: Tests in the Variable Density Wind Tunnel to Investigate the Effects of Scale and Turbulence on Airfoil Characteristics. TN 364, Feb. 1931.

- Abbott, I. H.: Experiments with an Airfoil Model on Which the Boundary Layer is Controlled Without the Use of Supplementary Equipment. TN 371, April 1931.
- Cuno, Otto: Experimental Determination of the Thickness of the Boundary Layer Along a Wing Section. TM 679, Aug. 1932.
- Stüper, J.: Investigation of Boundary Layers on an Airplane Wing in Free Flight. TM 751, Aug. 1934.
- Von Doenhoff, Albert E.: An Application of the von Karman-Millikan Laminar Boundary-Layer Theory and Comparison with Experiment. TN 544, Oct. 1935.
- Jacobs, Eastman N.: Recent Progress Concerning the Aerodynamics of Wing Sections. MP 41, Feb. 1936.
- Schmidbauer, Hans: Behavior of Turbulent Boundary Layers on Curved Convex Walls. TM 791, April 1936.
- Fediaevsky, K.: Turbulent Boundary Layer of an Airfoil. TM 822, April 1937.
- Clauser, Milton and Clauser, Francis:
 The Effect of Curvature on the Transition from Laminar to Turbulent
 Boundary Layer. TN 613, Sept. 1937.
- Von Doenhoff, Albert E.: A Preliminary Investigation of Boundary-Layer Transition Along a Flat Plate with Adverse Pressure Gradient. TN 639, March 1938.
- Von Doenhoff, Albert E.: A Method of Rapidly Estimating the Position of the Laminar Separation Point. TN 671, Oct. 1938.
- Abbott, Ira H. and Sherman, Albert: Flow Observations with Tufts and Lampblack of the Stalling of Four Typical Airfoil Sections in the NACA Variable-Density Tunnel. TN 672, Oct. 1938.
- Silverstein, Abe and Becker, John V.:
 Determination of Boundary-Layer
 Transition on Three Symmetrical
 Airfoils in the NACA Full-Scale Wind
 Tunnel. Rept. 637, 1939.
- Schubauer, G. B.: Air Flow in the Boundary Layer of an Elliptic Cylinder. Rept. 652, 1939.
- Jacobs, E. N.; Abbott, Ira H. and von Doenhoff, A. E.: Preliminary Investigation of Certain Laminar-Flow Airfoils for Application at High Speeds and Reynolds Numbers. ACR, Aug. 1939.

- Boundary Layer Wing Sections (Cont.)
- Hood, Manley J. and Gaydos, M. Edward: Effects of Propellers and of Vibration on the Extent of Laminar Flow on the NACA 27-212 Airfoil. ACR (WR L-784), Oct. 1939.
- Becker, John V.: Boundary-Layer Transition on the NACA 0012 and 23012
 Airfoils in the 8-Foot High-Speed Wind Tunnel. ACR (WR L-682), Jan. 1940.
- Von Doenhoff, Albert E.: Investigation of the Boundary Layer About a Symmetrical Airfoil in a Wind Tunnel of Low Turbulence. ACR (WR L-507), Aug. 1940.
- Schrenk, O.: Boundary Layer Removal by Suction. TM 974, April 1941.
- Wetmore, J. W.; Zalovcik, J. A. and Platt, Robert C.: A Flight Investigation of the Boundary-Layer Characteristics and Profile Drag of the NACA 35-215 Laminar-Flow Airfoil at High Reynolds Numbers. MR (WR L-532), May 1941.
- Schultz-Grunow, F.: New Frictional Resistance Law for Smooth Plates. TM 986, Sept. 1941.
- Koppenfels, Werner V.: Two-Dimensional Potential Flow Past a Smooth Wall with Partly Constant Curvature. TM 996, Nov. 1941.
- Jacobs, Eastman N.; Abbott, Ira H. and Davidson, Milton: Investigation of Extreme Leading-Edge Roughness on Thick Low-Drag Airfoils to Indicate Those Critical to Separation. CB (WR L-659), June 1942.
- Von Doenhoff, Albert E. and Tetervin, Neal: Investigation of the Variation of Lift Coefficient with Reynolds Number at a Moderate Angle of Attack on a Low-Drag Airfoil. CB (WR L-661), Nov. 1942.
- Frick, Charles W. and McCullough, George B.: Tests of a Heated Low Drag Airfoil. ACR (WR A-40), Dec. 1942.
- Von Doenhoff, Albert E. and Tetervin, Neal: Determination of General Relations for the Behavior of Turbulent Boundary Layers. Rept. 772, 1943.
- Charters, Alex C., Jr.: Transition Between Laminar and Turbulent Flow by Transverse Contamination. TN 891, March 1943.
- Schubauer, G. B. and Skramstad, H. K.: Laminar-Boundary-Layer Oscillations and Transition on a Flat Plate. ACR (WR W-8), April 1943.

- Liepmann, Hans W.: Investigations on Laminar Boundary-Layer Stability and Transition on Curved Boundaries. ACR 3H30 (WR W-107), Aug. 1943.
- Donaldson, Coleman duP.: Effects of Interaction Between Normal Shock and Boundary Layer. CB 4A27, Jan. 1944.
- Zalovcik, John A.; Wetmore, J. W. and von Doenhoff, Albert E.: Flight Investigation of Boundary-Layer Control by Suction Slots on an NACA 35-215 Low-Drag Airfoil at High Reynolds Numbers. ACR 4B29 (WR L-521), Feb. 1944.
- Zalovcik, John A.: Profile-Drag Coefficients of Conventional and Low-Drag Airfoils as Obtained in Flight. ACR L4E31 (WR L-139), May 1944.
- Abbott, Frank T., Jr. and Turner, Harold R., Jr.: The Effects of Roughness at High Reynolds Numbers on the Lift and Drag Characteristics of Three Thick Airfoils. ACR L4H21 (WR L-46), Aug. 1944.
- Quinn, John H., Jr. and Tucker, Warren A.: Scale and Turbulence Effects on the Lift and Drag Characteristics of the NACA 653-418, a = 1.0 Airfoil Section. ACR L4H11 (WR L-138), Aug. 1944.
- Tucker, Warren A. and Wallace, Arthur R.: Scale-Effect Tests in a Turbulent Tunnel of the NACA 653-418, a = 1.0 Airfoil Section with 0.20-Airfoil-Chord Split Flap. ACR L4I22 (WR L-128), Sept. 1944.
- Nitzberg, Gerald E.: The Theoretical Calculation of Airfoil Section Coefficients at Large Reynolds Numbers. ACR 4I12, Oct. 1944.
- Quinn, John H., Jr.: Tests of the NACA 653-018 Airfoil Section with Boundary-Layer Control by Suction. CB L4H10 (WR L-209), Oct. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Liepmann, H. W.: Investigation of Boundary Layer Transition on Concave Walls. ACR 4J28 (WR W-87), Feb. 1945.
- Sandahl, Carl A.: Wind-Tunnel Investigation of Effects of a Pusher Propeller on Lift, Profile Drag, Pressure Distribution, and Boundary-Layer Transition of a Flapped Wing. ACR L5C08 (WR L-148), April 1945.

- Boundary Layer Wing Sections (Cont.)
- Zalovcik, John A. and Skoog, Richard B.: Flight Investigation of Boundary-Layer Transition and Profile Drag of an Experimental Low-Drag Wing Installed on a Fighter-Type Airplane. ACR L5C08a (WR L-94), April 1945.
- Heaslet, Max A.: Theoretical Investigation of Methods for Computing Drag from Wake Surveys at High Subsonic Speeds. ARR 5C21 (WR W-1), June 1945.
- Zalovcik, John A.: Flight Investigation of Boundary-Layer and Profile-Drag Characteristics of Smooth Wing Sections of a P-47D Airplane. ACR L5H11a (WR L-86), Oct. 1945.
- Freeman, Hugh B.: Boundary-Layer-Control Tests of Two Wings in the Langley Propeller-Research Tunnel. TN 1007, Jan. 1946.
- Loftin, Laurence K., Jr.: Effects of Specific Types of Surface Roughness on Boundary-Layer Transition. ACR L5J29a (WR L-48), Feb. 1946.
- Schubauer, G. B. and Klebanoff, P. S.: Theory and Application of Hot-Wire Instruments in the Investigation of Turbulent Boundary Layers. ACR 5K27 (WR W-86), March 1946.
- Tetervin, Neal: Approximate Formulas for the Computation of Turbulent Boundary-Layer Momentum Thicknesses in Compressible Flows. ACR L6A22 (WR L-119), March 1946.
- Zalovcik, John A. and Daum, Fred L.:
 Flight Investigation at High Speeds of
 Profile Drag of Wing of a P-47D
 Airplane Having Production Surfaces
 Covered with Camouflage Paint. ACR
 L6B21 (WR L-98), March 1946.
- Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on the NACA 653-418, a = 1.0 Airfoil Section with a 0.29-Airfoil-Chord Double Slotted Flap. TN 1071, June 1946.
- Lees, Lester and Lin, Chia Chiao: Investigation of the Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1115, Sept. 1946.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.
- Ackeret, J.; Feldmann, F. and Rott, N.: Investigations of Compression Shocks and Boundary Layers in Gases Moving at High Speeds. TM 1113, Jan. 1947.

- McCullough, George B. and Gault, Donald E.: Boundary Layer and Stalling Characteristics of Two Symmetrical NACA Low Drag Airfoil Sections. RM A6L13, Jan. 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Allen, H. Julian and Nitzberg, Gerald E.: The Effect of Compressibility on the Growth of the Laminar Boundary Layer on Low-Drag Wings and Bodies. TN 1255, April 1947.
- Heaslet, Max A. and Nitzberg, Gerald E.: The Calculation of Drag for Airfoil Sections and Bodies of Revolution at Subcritical Speeds. RM A7B06, April 1947.
- Quinn, John H., Jr.: Tests of the NACA 641A212 Airfoil Section with a Slat, a Double Slotted Flap, and Boundary-Layer Control by Suction. TN 1293, May 1947.
- Ulrich, A.: Theoretical Investigation of Drag Reduction in Maintaining the Laminar Boundary Layer by Suction. TM 1121, June 1947.
- Schwier, W.: Lift Increase by Blowing Out Air, Tests on Airfoil of 12 Percent Thickness, Using Various Types of Flap. TM 1148, June 1947.
- Pierpont, P. Kenneth: Investigation of Suction-Slot Shapes for Controlling a Turbulent Boundary Layer. TN 1292, June 1947.
- Mendelsohn, Robert A.: Wind-Tunnel Investigation of the Boundary Layer and Wake and Their Relation to Airfoil Characteristics NACA 65₁-012 Airfoil with a True Contour Flap and a Beveled-Trailing-Edge Flap. TN 1304, June 1947.
- Regenscheit, B.: Drag Reduction by Suction of the Boundary Layer Separated Behind Shock Wave Formation at High Mach Numbers. TM 1168, July 1947.
- Lees, Lester: The Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1360, July 1947.
- Tetervin, Neal: A Review of Boundary-Layer Literature. TN 1384, July 1947.
- Quinn, John H., Jr.: Wind-Tunnel Investigation of the NACA 654-421 Airfoil Section with a Double Slotted Flap and Boundary-Layer Control by Suction. TN 1395, July 1947.

- Boundary Layer Wing Sections (Cont.)
- Pfenninger, Werner: Investigations on Reductions of Friction on Wings, in Particular by Means of Boundary Layer Suction. TM 1181, Aug. 1947.
- Bussmann, K. and Ulrich, A.: Systematic Investigations of the Influence of the Shape of the Profile Upon the Position of the Transition Point. TM 1185, Oct. 1947.
- Braslow, Albert L.; Visconti, Fioravante and Burrows, Dale L.: Preliminary Wind-Tunnel Investigation of the Effect of Area Suction on the Laminar Boundary Layer over an NACA 64A010 Airfoil. RM L7L15, April 1948.
- Brewer, Jack D. and Polhamus, Josephine F.: Wind-Tunnel Investigation of the Boundary Layer on an NACA 0009 Airfoil Having 0.25- and 0.50-Airfoil Chord Plain Sealed Flaps. TN 1574, April 1948.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.
- Racisz, Stanley F. and Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on NACA 655-424 Airfoil with Double Slotted Flap. TN 1631, June 1948.
- McCullough, George B. and Gault, Donald E.: An Experimental Investigation of an NACA 631-012 Airfoil Section with Leading-Edge Suction Slots. TN 1683, Aug. 1948.
- Boelter, L. M. K.; Grossman, L. M.; Martinelli, R. C. and Morrin, E. H.: An Investigation of Aircraft Heaters. XXIX - Comparison of Several Methods of Calculating Heat Losses from Airfoils. TN 1453, Oct. 1948.
- Braslow, Albert L. and Visconti,
 Fioravante: Investigation of BoundaryLayer Reynolds Number for Transition
 on an NACA 65(215)-114 Airfoil in the
 Langley Two-Dimensional Low-Turbulence Pressure Tunnel. TN 1704, Oct.
 1948.
- Nuber, Robert J. and Needham, James R., Jr.: Exploratory Wind-Tunnel Investigation of the Effectiveness of Area Suction in Eliminating Leading-Edge Separation over an NACA 641A212 Airfoil. TN 1741, Nov. 1948.

- Loftin, Laurence K., Jr. and Bursnall, William J.: The Effects of Variations in Reynolds Number Between 3.0 x 106 and 25.0 x 106 upon the Aerodynamic Characteristics of a Number of NACA 6-Series Airfoil Sections. TN 1773, Dec. 1948.
- Von Doenhoff, Albert E. and Horton, Elmer A.: Wind-Tunnel Investigation of NACA 65,3-418 Airfoil Section with Boundary-Layer Control Through a Single Suction Slot Applied to a Plain Flap. RM L9A20, Feb. 1949.
- Schlichting, H.: An Approximate Method for Calculation of the Laminar Boundary Layer with Suction for Bodies of Arbitrary Shape. TM 1216, March 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I - Laminar Flows. TM 1217, April 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II - Turbulent Flows. TM 1218, April 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Gault, Donald E.: Boundary-Layer and Stalling Characteristics of the NACA 63-009 Airfoil Section. TN 1894, June 1949.
- Burrows, Dale L.; Braslow, Albert L. and Tetervin, Neal: Experimental and Theoretical Studies of Area Suction for the Control of the Laminar Boundary Layer on a Porous Bronze NACA 64A010 Airfoil. TN 1905, July 1949.
- McCullough, George B. and Gault, Donald E.: Boundary-Layer and Stalling Characteristics of the NACA 64A006 Airfoil Section. TN 1923, Aug. 1949.
- Zobel, Th.: Flow Measurement by Means of Light Interferences. TN 1253, Aug. 1949.

REYNOLDS NUMBER EFFECTS (1.2.1.7)

- Prepared by Paris Office, NACA: Some New Tests at the Gottingen Laboratory. TM 16, April 1921.
- Zahm, A. F.: Influence of Model Surface and Air Flow Texture on Resistance of Aerodynamic Bodies. Rept. 139, 1922.
- Robert, Lieut. Col.: Applying the Results of Experiments on Small Models in the Wind Tunnel to the Calculation of Full-Sized Aircraft. TM 84, April 1922.

- Reynolds No. Effects . Wing Sections (Cont.)
- LePage, W. L. and Nichols, J. T.: The Effect of Wind Tunnel Turbulence upon the Forces Measured on Models. TN 191, May 1924.
- Munk, Max M. and Miller, Elton W.: The Variable Density Wind Tunnel of the National Advisory Committee for Aeronautics. Rept. 227, 1926.
- Munk, Max M. and Miller, Elton W.: The Aerodynamic Characteristics of Seven Frequently Used Wing Sections at Full Reynolds Number. Rept. 233, 1926.
- Jacobs, Eastman N.: Characteristics of Propeller Sections Tested in the Variable Density Wind Tunnel. Rept. 259, 1927.
- Weidinger, Hanns: Drag Measurements on a Junkers Wing Section-Application of the Betz Method to the Results of Comparative Tests Made on a Model and on an Airplane in Flight. TM 428, Sept. 1927.
- DeFoe, George L.: Resistance of Streamline Wires. TN 279, March 1928.
- Katzmayr, R.: Aeromechanical Experimentation (Wind Tunnel Tests). TM 508, April 1929.
- Stack, John: Tests in the Variable Density Wind Tunnel to Investigate the Effects of Scale and Turbulence on Airfoil Characteristics. TN 364, Feb. 1931.
- Jacobs, Eastman N. and Anderson, Raymond F.: Large-Scale Aerodynamic Characteristics of Airfoils as Tested in the Variable Density Wind Tunnel. Rept. 352, 1933.
- Jacobs, Eastman N. and Clay, William C.: Characteristics of the NACA 23012 Airfoil from Tests in the Full-Scale and Variable-Density Tunnels. Rept. 530, 1935.
- Schubauer, G. B. and Dryden, H. L.: The Effect of Turbulence on the Drag of Flat Plates. Rept. 546, 1935.
- Pinkerton, Robert M.: Calculated and Measured Pressure Distributions over the Midspan Section of the NACA 4412 Airfoil. Rept. 563, 1936.
- Jacobs, Eastman N.: Recent Progress Concerning the Aerodynamics of Wing Sections. MP 41, Feb. 1936.
- Jacobs, Eastman N. and Sherman, Albert: Airfoil Section Characteristics as Affected by Variations of the Reynolds Number. Rept. 586, 1937.

- Gurjienko, G.: Universal Logarithmic Law of Velocity Distribution as Applied to the Investigation of Boundary Layer and Drag of Streamline Bodies at Large Reynolds Number. TM 842, Nov. 1937.
- Pinkerton, Robert M.: The Variation with Reynolds Number of Pressure Distribution over an Airfoil Section. Rept. 613, 1938.
- Silverstein, Abe and Becker, John V.:
 Determination of Boundary-Layer
 Transition on Three Symmetrical Airfoils in the NACA Full-Scale Wind
 Tunnel. Rept. 637, 1939.
- Abbott, Ira H. and Greenberg, Harry: Tests in the Variable-Density Wind Tunnel of the NACA 23012 Airfoil with Plain and Split Flaps. Rept. 661, 1939.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Various Arrangements of Slotted Flaps. Rept. 664, 1939.
- Hood, Manley J.: The Effects of Some Common Surface Irregularities on Wing Drag. TN 695, March 1939.
- Jacobs, Eastman N.: Preliminary Report on Laminar-Flow Airfoils and New Methods Adopted for Airfoil and Boundary-Layer Investigations. ACR (WR L-345), June 1939.
- Jacobs, E. N.; Abbott, Ira H. and von Doenhoff, A. E.: Preliminary Investigation of Certain Laminar-Flow Airfoils for Application at High Speeds and Reynolds Numbers. ACR, Aug. 1939.
- Becker, John V.: Boundary-Layer Transition on the NACA 0012 and 23012 Airfoils in the 8-Foot High-Speed Wind Tunnel. ACR (WR L-682), Jan. 1940.
- Abbott, Ira H. and Turner, Harold R., Jr.: Lift and Drag Tests of Three Airfoil Models with Fowler Flaps Submitted by Consolidated Aircraft Corporation. MR (WR L-677), Dec. 1941.
- Underwood, William J. and Abbott, Frank T., Jr.: Test of NACA 66, 2-116 a = 0.6 Airfoil Section Fitted with Pressure Balanced and Slotted Flaps for the Wing of the XP-33 Airplane. MR (WR L-701), May 1942.
- Jacobs, Eastman N.; Abbott, Ira H. and Davidson, Milton: Investigation of Extreme Leading-Edge Roughness on Thick Low-Drag Airfoils to Indicate Those Critical to Separation. CB (WR L-659), June 1942.

- Reynolds No. Effects Wing Sections (Cont.)
- Von Doenhoff, Albert E. and Horton, Elmer A.: Preliminary Investigation in the NACA Low-Turbulence Tunnel of Low-Drag Airfoil Sections Suitable for Admitting Air at the Leading Edge. ACR (WR L-694), July 1942.
- Von Doenhoff, Albert E. and Tetervin, Neal: Investigation of the Variation of Lift Coefficient with Reynolds Number at a Moderate Angle of Attack on a Low-Drag Airfoil. CB (WR L-661), Nov. 1942.
- Abbott, Frank T., Jr. and Underwood, William J.: Wind-Tunnel Investigation of Profile Drag and Lift of an Intermediate Wing Section of the XP-51 Airplane with Beveled Trailing-Edge and Contour. MR (WR L-615), Jan. 1943.
- Letko, W.; Hollingworth, T. A. and Anderson, R. A.: Wind-Tunnel Tests of Ailerons at Various Speeds. IV -Ailerons of 0.20 Airfoil Chord and True Contour with 0.35 Aileron-Chord Extreme Blunt-Nose Balance on the NACA 23012 Airfoil. ACR 3H28 (WR L-433), Aug. 1943.
- Letko, W. and Kemp, W. B.: Wind-Tunnel Tests of Ailerons at Various Speeds. III - Ailerons of 0.20 Airfoil Chord and True Contour with 0.35-Aileron-Chord Frise Balance on the NACA 23012 Airfoil. ACR 3I14 (WR L-325), Sept. 1943.
- Braslow, Albert L.: Investigation of Surface Irregularities on an NACA 63(420)-416, a = 1.0 Airfoil Section for The Glenn L. Martin Company Design 195. MR (WR A-93), Oct. 1943.
- Letko, W. and Denaci, H. G.: Wind Tunnel Tests of Ailerons at Various Speeds. V Pressure Distributions over the NACA 66,2-216 and NACA 23012 Airfoils with Various Balances on 0.20-Chord Ailerons. ACR 3K05 (WR L-434), Nov. 1943.
- Davidson, Milton; Houbolt, John C.; Rafel, Norman and Rossman, Carl A.: Preliminary Aerodynamic and Structural Tests Showing the Effect of Compressive Load on the Fairness of a Low-Drag Wing Specimen with Chordwise Hat-Section Stiffeners. ACR 3L02 (WR L-389), Dec. 1943.
- Anderson, Joseph L.: Tests of NACA 65(216)-420 and 66(218)-420 Airfoils at High Speeds. CMR (WR A-87), April 1944.

- Zalovcik, John A.: Profile-Drag Coefficients of Conventional and Low-Drag Airfoils as Obtained in Flight. ACR L4E31 (WR L-139), May 1944.
- Von Doenhoff, Albert E. and Nuber, Robert J.: Drag Measurements at High Reynolds Numbers of a 100-Inch-Chord NACA 23016 Practical Construction Wing Section Submitted by Chance Vought Aircraft Company. MR (WR L-752), June 1944.
- Braslow, Albert L.: Investigation of Effects of Various Camouflage Paints and Painting Procedures on the Drag Characteristics of an NACA 65(421)-420, a = 1.0 Airfoil Section. CB L4G17 (WR L-141), July 1944.
- Quinn, John H., Jr. and Tucker, Warren A.: Scale and Turbulence Effects on the Lift and Drag Characteristics of the NACA 653-418, a = 1.0 Airfoil Section. ACR L4H11 (WR L-138), Aug. 1944.
- Abbott, Frank T., Jr. and Turner, Harold R., Jr.: The Effects of Roughness at High Reynolds Numbers on the Lift and Drag Characteristics of Three Thick Airfoils. ACR L4H21 (WR L-46), Aug. 1944.
- Tucker, Warren A. and Wallace, Arthur R.: Scale-Effect Tests in a Turbulent Tunnel of the NACA 653-418, a = 1.0 Airfoil Section with 0.20-Airfoil-Chord Split Flap. ACR L4I22 (WR L-128), Sept. 1944.
- Zalovcik, John A. and Wood, Clotaire:
 A Flight Investigation of the Effect of
 Surface Roughness on Wing Profile
 Drag with Transition Fixed. ARR
 L4I25 (WR L-159), Sept. 1944.
- Von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Aerodynamic Characteristics of the NACA 747A315 and 747A415 Airfoils from Tests in the NACA Two-Dimensional Low-Turbulence Pressure Tunnel. CB L4I25 (WR L-156), Sept. 1944.
- Nitzberg, Gerald E.: The Theoretical Calculation of Airfoil Section Coefficients at Large Reynolds Numbers. ACR 4112, Oct. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Nuber, Robert J. and Rice, Fred J., Jr.:
 Lift Tests of a 0.1536c Thick Douglas
 Airfoil Section of NACA 7-Series Type
 Equipped with a Lateral-Control Device for Use with a Full-Span DoubleSlotted Flap on the C-74 Airplane.
 MR L5C24a (WR L-641), March 1945.

- Reynolds No. Effects Wing Sections (Cont.)
- Zalovcik, John A. and Skoog, Richard B.: Flight Investigation of Boundary-Layer Transition and Profile Drag of an Experimental Low-Drag Wing Installed on a Fighter-Type Airplane. ACR L5C08a (WR L-94), April 1945.
- Zalovcik, John A.: Flight Investigation of Boundary-Layer and Profile-Drag Characteristics of Smooth Wing Sections of a P-47D Airplane. ACR L5H11a (WR L-86), Oct. 1945.
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of Six Airfoil Sections for the Wing of the Vega XP2V-1 Airplane TED No. NACA 231. MR L5I21 (WR L-681), Oct. 1945.
- Quinn, John H., Jr.: Effects of Reynolds Number and Leading-Edge Roughness on Lift and Drag Characteristics of the NACA 653-418, a = 1.0 Airfoil Section. CB L5J04 (WR L-82), Nov. 1945.
- Loftin, Lawrence K., Jr. and Rice, Fred J., Jr.: Two-Dimensional Wind-Tunnel Investigation of Two NACA Low-Drag Airfoil Sections Equipped with Slotted Flaps and a Plain NACA Low-Drag Airfoil Section for XF6U-1 Airplane TED No. NACA 2367. MR L5L11 (WR L-746), Jan. 1946.
- Loftin, Lawrence K., Jr.: Effects of Specific Types of Surface Roughness on Boundary-Layer Transition. ACR L5J29a (WR L-48), Feb. 1946.
- Spreiter, John R. and Steffen, Paul J.: The Effect of Mach and Reynolds Numbers on Maximum Lift Coefficient. TN 1044, March 1946.
- Zalovcik, John A. and Daum, Fred L.: Flight Investigation at High Speeds of Profile Drag of Wing of a P-47D Airplane Having Production Surfaces Covered with Camouflage Paint. ACR L6B21 (WR L-98), March 1946.
- Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on the NACA 653-418, a = 1.0 Airfoil Section with a 0.29-Airfoil-Chord Double Slotted Flap. TN 1071, June 1946.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.

- Racisz, Stanley F.: Two-Dimensional Wind-Tunnel Investigation of Modified NACA 65(112)-111 Airfoil with 35-Percent-Chord Slotted Flap at Reynolds Numbers up to 25 Million. TN 1463, Jan. 1947.
- Ackeret, J.; Feldmann, F. and Rott, N.: Investigations of Compression Shocks and Boundary Layers in Gases Moving at High Speeds. TM 1113, Jan. 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Lees, Lester: The Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1360, July 1947.
- Tetervin, Neal: A Review of Boundary-Layer Literature. TN 1384, July 1947.
- Bussmann, K. and Ulrich, A.: Systematic Investigations of the Influence of the Shape of the Profile upon the Position of the Transition Point. TM 1185, Oct. 1947.
- Racisz, Stanley F.: Investigation of NACA 65(112)A111 (Approx.) Airfoil with 0.35-Chord Slotted Flap at Reynolds Numbers up to 25 Million. TN 1463, Oct. 1947.
- Cahill, Jones F. and Racisz, Stanley F.: Wind-Tunnel Investigation of Seven Thin NACA Airfoil Sections to Determine Optimum Double-Slotted-Flap Configurations. TN 1545, April 1948.
- Loftin, Laurence K., Jr. and Poteat, M. Irene: Aerodynamic Characteristics of Several NACA Airfoil Sections at Seven Reynolds Numbers from 0.7 x 106 to 9.0 to 106. RM L8B02, May 1948.
- Visconti, Fioravante: Investigation of an Approximately 0.178-Chord-Thick NACA 6-Series-Type Airfoil Section Equipped with Sealed Internally Balanced 0.20-Chord Ailerons and with a 0.05-Chord Tab. TN 1590, May 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: Aerodynamic Characteristics of a Number of Modified NACA Four-Digit-Series Airfoil Sections. TN 1591, June 1948.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.

- Reynolas No. Effects Wing Sections (Cont.)
- Racisz, Stanley F. and Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on NACA 655-424 Airfoil with Double Slotted Flap. TN 1631, June 1948.
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: An Evaluation of the Characteristics of a 10-Percent-Thick NACA 66-Series Airfoil Section with a Special Mean-Camber Line Designed to Produce a High Critical Mach Number. TN 1633, July 1948.
- Braslow, Albert L. and Visconti, Fioravante: Investigation of Boundary-Layer Reynolds Number for Transition on an NACA 65(215)-114 Airfoil in the Langley Two-Dimensional Low-Turbulence Pressure Tunnel. 'TN 1704, Oct. 1948.
- Loftin, Laurence K., Jr. and Bursnall, William J.: The Effects of Variations in Reynolds Number Between 3.0 x 106 and 25.0 x 106 upon the Aerodynamic Characteristics of a Number of NACA 6-Series Airfoil Sections. TN 1773, Dec. 1948.
- Gottlieb, Stanley M.: Two-Dimensional Wind-Tunnel Investigation of Two NACA 6-Series Airfoils with Leading-Edge Slats. RM L8K22, Jan. 1949.
- Loftin, Laurence K., Jr. and Smith, Hamilton A.: Two-Dimensional Aerodynamic Characteristics of 34 Miscellaneous Airfoil Sections. RM L8L08, Jan. 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I Laminar Flows. TM 1217, April 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II Turbulent Flows. TM 1218, April 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Schaefer, Raymond F.; Loftin, Laurence K., Jr. and Horton, Elmer A.: Two-Dimensional Investigation of Five Related NACA Airfoil Sections Designed for Rotating-Wing Aircraft. TN 1922, July 1949.

MACH NUMBER EFFECTS (1.2.1.8)

Prepared by Paris Office, NACA: Some New Tests at the Gottingen Laboratory. TM 16, April 1921.

- Briggs, L. J.; Hull, G. F. and Dryden, H. L.: Aerodynamic Characteristics of Airfoils at High Speeds. Rept. 207, 1925.
- Briggs, L. J. and Dryden, H. L.: Pressure Distribution over Airfoils at High Speeds. Rept. 255, 1927.
- Briggs, L. J. and Dryden, H. L.: Aerodynamic Characteristics of Twenty-Four Airfoils at High Speeds. Rept. 319, 1929.
- Briggs, L. J. and Dryden, H. L.: Aerodynamic Characteristics of Circular-Arc Airfoils at High Speeds. Rept. 365, 1930.
- Stack, John: The NACA High-Speed Wind-Tunnel and Tests of Six Propeller Sections. Rept. 463, 1933.
- Stack, John: The Compressibility Burble. TN 543, Oct. 1935.
- Lindsey, W. F.: Drag of Cylinders of Simple Shapes. Rept. 619, 1938.
- Kaplan, Carl: Compressible Flow About Symmetrical Joukowski Profiles. Rept. 621, 1938.
- Kaplan, Carl: Two-Dimensional Subsonic Compressible Flow Past Elliptic Cylinders. Rept. 624, 1938.
- Stack, John; Lindsey, W. F. and Littell, Robert E.: The Compressibility Burble and the Effect of Compressibility on Pressures and Forces Acting on an Airfoil. Rept. 646, 1938.
- Stack, John and Lindsey, W. F.: Tests of N-85, N-86, and N-87 Airfoil Sections in the 11-Inch High-Speed Wind-Tunnel. TN 665, Sept. 1938.
- Kaplan, Carl: A Theoretical Study of the Moment on a Body in a Compressible Fluid. Rept. 671, 1939.
- Robinson, Russell G. and Wright, Ray H.: Estimation of Critical Speeds of Airfoils and Streamline Bodies. ACR (WR L-781), March 1940.
- Becker, John V.: High-Speed Wind-Tunnel Tests of the NACA 23012 and 23012-64 Airfoils. ACR (WR L-357), Feb. 1941.
- Dickinson, H. B.: Propeller-Design Problems of High-Speed Airplanes. ACR, April 1941.
- Luoma, Arvo A.: Critical Speeds and Profile Drag of the Inboard Sections of a Conventional Propeller. ARR (WR L-369), Sept. 1941.

- Mach No. Effects Wing Sections (Cont.)
- Becker, John V.: High-Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.
- Stack, John: Tests of Airfoils Designed to Delay the Compressibility Burble. Rept. 763, 1943.
- Letko, W.; Denaci, H. G. and Freed, C.: Wind-Tunnel Tests of Ailerons at Various Speeds. I Ailerons of 0.20 Airfoil Chord and True Contour with 0.35 Aileron-Chord Extreme Blunt Nose Balance on the NACA 66,2-216 Airfoil. ACR 3F11 (WR L-431), June 1943.
- Letko, W. and Kemp, W. B.: Wind-Tunnel Tests of Ailerons at Various Speeds. III - Ailerons of 0.20 Airfoil Chord and True Contour with 0.35-Aileron-Chord Frise Balance on the NACA 23012 Airfoil. ACR 3I14 (WR L-325), Sept. 1943.
- Letko, W. and Denaci, H. G.: Wind-Tunnel Tests of Ailerons at Various Speeds. V - Pressure Distributions over the NACA 66,2-216 and NACA 23012 Airfoils with Various Balances on 0.20-Chord Ailerons. ACR 3K05 (WR L-434), Nov. 1943.
- Kaplan, Carl: The Flow of a Compressible Fluid Past a Circular Arc Profile. Rept. 794, 1944.
- Anderson, Joseph L.: Tests of NACA 65(216)-420 and 66(218)-420 Airfoils at High Speeds. CMR (WR A-87), April 1944.
- Heaslet, Max A.: Critical Mach Numbers of Various Airfoil Sections. ACR 4G18, July 1944.
- Zalovcik, John A. and Wood, Clotaire: A Flight Investigation of the Effect of Surface Roughness on Wing Profile Drag with Transition Fixed. ARR L4I25 (WR L-159), Sept. 1944.
- Byrne, Robert W.: Experimental Constriction Effects in High-Speed Wind-Tunnels. ACR L4L07a (WR L-74), Dec. 1944.
- Cleary, Harold E.: Effects of Compressibility on Maximum Lift Coefficients for Six Propeller Airfoils. ACR L4L21a (WR L-514), Jan. 1945.
- Smith, Norman F. and Baals, Donald D.: Wind-Tunnel Investigation of a High-Critical-Speed Fuselage Scoop Including the Effects of Boundary Layer. ACR L5B01a (WR L-733), Feb. 1945.

- Zalovcik, John A. and Skoog, Richard B.: Flight Investigation of Boundary-Layer Transition and Profile Drag of an Experimental Low-Drag Wing Installed on a Fighter-Type Airplane. ACR L5C08a (WR L-94), April 1945.
- Ferri, Antonio: Completed Tabulation in the United States of Tests of 24 Airfoils at High Mach Numbers (Derived) from Interrupted Work at Guidonia, Italy in the 1.31- by 1.74-Foot High-Speed Tunnel. ACR L5E21 (WR L-143), June 1945.
- Zalovcik, John A.: Flight Investigation of Boundary-Layer and Profile-Drag Characteristics of Smooth Wing Sections of a P-47D Airplane. ACR L5H11a (WR L-86), Oct. 1945.
- Kaplan, Carl: Effect of Compressibility at High Subsonic Velocities on the Lifting Force Acting on an Elliptic Cylinder. Rept. 834, 1946.
- Barlow, William H.: Flight Investigation at High Speeds of the Drag of Three Airfoils and a Circular Cylinder Representing Full-Scale Propeller Shanks. Rept. 852, 1946.
- Lindsey, W. F.: Effect of Compressibility on the Pressures and Forces Acting on a Modified NACA 65,3-019 Airfoil Having a 0.20-Chord Flap. ACR L5G31a (WR L-76), Jan. 1946.
- Spreiter, John R. and Steffen, Paul J.: The Effect of Mach and Reynolds Numbers on Maximum Lift Coefficient. TN 1044, March 1946.
- Zalovcik, John A. and Daum, Fred L.:
 Flight Investigation at High Speeds of
 Profile Drag of Wing of a P-47D Airplane Having Production Surfaces
 Covered with Camouflage Paint. ACR
 L6B21 (WR L-98), March 1946.
- Heaslet, Max. A. and Pardee, Otway O'M.: Critical Mach Numbers of Thin Airfoil Sections with Plain Flaps. ACR 6A30, April 1946.
- Wright, Ray H. and Donaldson, Coleman duP.: Comparison of Two-Dimensional Air Flows About an NACA 0012 Airfoil of 1-Inch Chord at Zero Lift in Open and Closed 3-Inch Jets and Corrections for Jet-Boundary Interference. TN 1055, May 1946.
- Luoma, Arvo A.: Effect of Compressibility on Section Characteristics of an Airfoil with a Round-Nose Slotted Frise Aileron. TN 1075, May 1946.
- Robinson, Harold L.: High-Speed Investigation of Skin Wrinkles on Two NACA Airfoils. TN 1121, Aug. 1946.

- Mach No. Effects Wing Sections (Cont.)
- Lees, Lester: A Discussion of the Application of the Prandtl-Glauert Method to Subsonic Compressible Flow over a Slender Body of Revolution. TN 1127, Sept. 1946.
- Adams, Richard E. and Silsby, Norman S.: Flight Investigation of the Effect of a Local Change in Wing Contour on Chordwise Pressure Distribution at High Speeds. TN 1152, Sept. 1946.
- Heaslet, Max A.: Compressible Potential Flow with Circulation About a Circular Cylinder. Rept. 780, 1947.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow Past Thick Airfoil Sections. RM L6J17a, Jan. 1947.
- Ackeret, J.; Feldmann, F. and Rott, N.: Investigations of Compression Shocks and Boundary Layers in Gases Moving at High Speeds. TM 1113, Jan. 1947.
- Ivey, H. Reese; Stickle, George W. and Schuettler, Alberta: Charts for Determining the Characteristics of Sharp-Nose Airfoils in Two-Dimensional Flow at Supersonic Speeds. TN 1143, Jan. 1947.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.
- Ivey, H. Reese: Notes on the Theoretical Characteristics of Two-Dimensional Supersonic Airfoils. TN 1179, Jan. 1947.
- Allen, H. Julian; Heaslet, Max A. and Nitzberg, Gerald E.: The Interaction of Boundary-Layer and Compression-Shock and Its Effect upon Airfoil Pressure Distributions. RM A7A02, March 1947.
- Lippisch, A. and Beuschausen, W.: Pressure Distribution Measurements at High Speed and Oblique Incidence of Flow. TM 1115, March 1947.
- Beeler, De E. and Gerard, George: Wake Measurements Behind a Wing Section of a Fighter Airplane in Fast Dives. TN 1190, March 1947.
- Lindsey, W. F.; Daley, Bernard N. and Humphreys, Milton D.: The Flow and Force Characteristics of Supersonic Airfoils at High Subsonic Speeds. TN 1211, March 1947.

- Ivey, H. Reese and Bowen, Edward N., Jr.: Theoretical Supersonic Lift and Drag Characteristics of Symmetrical Wedge-Shape-Airfoil Sections as Affected by Sweepback Outside the Mach Cone. TN 1226, March 1947.
- Heaslet, Max A. and Nitzberg, Gerald E.:
 The Calculation of Drag for Airfoil
 Sections and Bodies of Revolution at
 Subcritical Speeds. RM A7B06,
 April 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Allen, H. Julian and Nitzberg, Gerald E.:
 The Effect of Compressibility on the
 Growth of the Laminar Boundary Layer
 on Low-Drag Wings and Bodies.
 TN 1255, April 1947.
- Regenscheit, B.: Drag Reduction by Suction of the Boundary-Layer Separated Behind Shock Wave Formation at High Mach Numbers. TM 1168, July 1947.
- Lees, Lester: The Stability of the Laminar Boundary-Layer in a Compressible Fluid. TN 1360, July 1947.
- Graham, Donald J.: High-Speed Tests of an Airfoil Section Cambered to Have Critical Mach Numbers Higher than Those Attainable with a Uniform-Load Mean Line. TN 1396, July 1947.
- Stevenson, David B. and Byrne, Robert W.:
 High-Speed Wind-Tunnel Tests of an
 NACA 16-009 Airfoil Having a 32.9Percent-Chord Flap with an Overhang
 20.7 Percent of the Flap Chord.
 TN 1406, Aug. 1947.
- Stevenson, David B. and Adler, Alfred A.:
 High-Speed Wind-Tunnel Tests of an
 NACA 0009-64 Airfoil Having a 33.4Percent-Chord Flap with an Overhang
 20.1 Percent of the Flap Chord.
 TN 1417, Sept. 1947.
- Nitzberg, Gerald E. and Crandall, Stewart: Some Fundamental Similarities Between Boundary-Layer Flow at Transonic and Low Speeds. TN 1623, June 1948.
- Tucker, Warren A.: Notes on Geared Tabs at Supersonic Speeds. RM L7L04, July 1948.
- Ivey, H. Reese; Klunker, E. Bernard and Bowen, Edward N.: A Method for Determining the Aerodynamic Characteristics of Two- and Three-Dimensional Shapes at Hypersonic Speeds. TN 1613, July 1948.

- Mach No. Effects Wing Sections (Cont.)
- Loftin, Laurence K., Jr. and Cohen, Kenneth S.: An Evaluation of the Characteristics of a 10-Percent-Thick NACA 66-Series Airfoil Section with a Special Mean-Camber Line Designed to Produce a High Critical Mach Number. TN 1633, July 1948.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow Past Thick Airfoil Sections. TN 1657, July 1948.
- Lindsey, W. F.; Stevenson, D. B. and Daley, Bernard N.: Aerodynamic Characteristics of 24 NACA 16-Series Airfoils at Mach Numbers Between 0.3 and 0.8. TN 1546, Sept. 1948.
- Wall, Nancy E.: Chordwise Pressure Distributions on a 12-Foot-Span Wing of NACA 66-Series Airfoil Sections up to a Mach Number of 0.60. TN 1696, Oct. 1948.
- Murray, Harry E.: Comparison with Experiment of Several Methods of Predicting the Lift of Wings in Subsonic Compressible Flow. TN 1739, Oct. 1948.
- Ivey, H. Reese and Morrissette, Robert R.:
 An Approximate Determination of the
 Lift of Slender Cylindrical Bodies and
 Wing-Body Combinations at Very High
 Supersonic Speeds. TN 1740, Oct.
 1948.
- Emmons, Howard W.: Flow of a Compressible Fluid Past a Symmetrical Airfoil in a Wind-Tunnel and in Free Air. TN 1746, Nov. 1948.
- Graham, Donald J.: The Development of Cambered Airfoil Sections Having Favorable Lift Characteristics at Supercritical Mach Numbers. TN 1771, Dec. 1948.
- Luoma, Arvo A.: An Investigation of the Section Characteristics of Plain Unsealed Ailerons on an NACA 66,1-115 Airfoil Section in the Langley 8-Foot High-Speed Tunnel. TN 1596, Jan. 1949.
- Nitzberg, Gerald E. and Crandall, Stewart: A Study of Flow Changes Associated with Airfoil Section Drag Rise at Supercritical Speeds. TN 1813, Feb. 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary-Layer. TM 1229, April 1949.

- Daley, Bernard N. and Hanna, Lillian E.: Subsonic Two-Dimensional-Flow Conditions Near an Airfoil Determined by Static Pressures Measured at the Tunnel Wall. TN 1873, April 1949.
- Göthert, B.: Airfoil Measurements in the DVL High-Speed Wind Tunnel (2.7-Meter Diameter). TM 1240, June 1949.
- Costello, George R.: Method of Designing Airfoils with Prescribed Velocity Distributions in Compressible Potential Flows. TN 1913, Aug. 1949.

COMPLETE WINGS

(1.2.2)

- Aerodynamic Characteristics of Aerofoils. Rept. 93, 1921.
- Sixth Meeting of the Members of the German Scientific Association for Aeronautics. TM 20, April 1921.
- Aerodynamic Characteristics of Airfoils III. (Continuation of Rept's. 93 and 124). Rept. 182, 1924.
- Aerodynamic Characteristics of Airfoils IV. (Continuation of Rept's. 93, 124, and 182). Rept. 244, 1926.
- Shoemaker, James M.: Resistance of a Fifteen-Centimeter Disk. TN 252, Dec. 1926.
- Seiferth, R.: Investigation of a Wing with an Auxiliary Upper Part. TM 418, June 1927.
- Reid, Elliott G.: Airfoil Lift with Changing Angle of Attack. TN 266, Sept. 1927.
- Aerodynamic Characteristics of Airfoils V. (Continuation of Rept's. 93, 124, 182, and 244). Rept. 286, 1928.
- Knight, Montgomery and Loeser, Oscar, Jr.: Pressure Distribution over a Rectangular Monoplane Wing Model up to 90° Angle of Attack. Rept. 288, 1928.
- Carroll, Thomas: The Effect on Performance of a Cutaway Center Section. TN 273, Jan. 1928.
- Rhode, R. V.: Pressure Distribution on Wing Ribs of the VE-7 and TS Airplanes in Flight. II Pull-Ups. TN 277, Jan. 1928.
- Gough, Melvin N.: The Effect of Fillets Between Wings and Fuselage on the Drag and Propulsive Efficiency of an Airplane. TN 299, Oct. 1928.

- Complete Wings (Cont.)
- Loeser, Oscar E., Jr.: Pressure Distribution Tests on PW-9 Wing Models From -18° Through 90° Angle of Attack Rept. 296, 1929.
- Aerodynamic Characteristics of Airfoils VI. (Continuation of Rept's. 93, 124, 182, 244, and 286). Rept. 315, 1929.
- Louden, F. A.: Collection of Wind-Tunnel Data on Commonly Used Wing Sections. Rept. 331, 1929.
- Weick, Fred E.: Full Scale Investigation of the Drag of a Wing Radiator. TN 318, Sept. 1929.
- Rhode, Richard V. and Pearson, Henry A.: A Method for Computing Leading-Edge Loads. Rept. 413, 1931.
- Sherman, Albert: The Aerodynamic Effects of Wing Cut-Outs. Rept. 480, 1934.
- De Lajarte, A. Durfaure: Chief Characteristics and Advantages of Tailless Airplanes. TM 794, May 1936.
- Pearson, E. O. Jr.; Evans, A. J. and West, F. E., Jr.: Effects of Compressibility on the Maximum Lift Characteristics and Spanwise Load Distribution of a 12-Foot-Span Fighter-Type Wing of NACA 230-Series Airfoil Sections. ACR L5G10 (WR L-51), Nov. 1945.
- Margolis, Kenneth: Supersonic Wave Drag of Sweptback Tapered Wings at Zero Lift. TN 1448, Oct. 1947.
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. (Partial Report: Triangular Wing). TM 1176, May 1948.
- Buschner, R.: On the Installation of Jet Engine Nacelles on a Wing. Fourth Partial Report: Pressure-Distribution Measurements on a Sweptback Wing with Jet Engine Nacelle. TM 1226, July 1949.

WING THEORY (1.2.2.1)

- De Bothezat, George: An Introduction to the Study of the Laws of Air Resistance of Aerofoils. Rept. 28, 1920.
- Parker, H. F.: The Parker Variable Camber Wing. Rept. 77, 1920.

- Prandtl, L.: Applications of Modern Hydrodynamics to Aeronautics. Rept. 116, 1921.
- National Advisory Committee for Aeronautics. The Minimum Induced Drag of Aerofoils. Rept. 121, 1921.
- Le Sueur: Analytical Methods for Computing the Polar Curves of Airplanes. TM 8, March 1921.
- Von Mises, R.: Lift Theory of Supporting Surfaces. Second Article. TM 41, 1921.
- Prandtl, L.: Effects of Varying the Relative Vertical Position of Wing and Fuselage. TN 75, Dec. 1921.
- Munk, Max M.: General Biplane Theory. Rept. 151, 1922.
- Diehl, Walter S.: Effect of Aerofoil Aspect Ratio on the Slope of the Lift Curve. TN 79, Jan. 1922.
- Wieselsberger, C.: Wing Resistance Near the Ground. TM 77, April 1922.
- Munk, Max M.: The Twisted Wing with Elliptical Plan Form. TN 109, Aug. 1922.
- Mises: Location of Center of Pressure of Airplane Wings. TM 165, Nov. 1922.
- Delanghe, C.: Marcel Besson Wing Sections. TM 180, Jan. 1923.
- Munk, Max M.: Elements of the Wing Section Theory and of the Wing Theory. Rept. 191, 1924.
- Von Sanden, H.: Interference of Multiplane Wings Having Elliptical Lift Distribution. TN 181, Feb. 1924.
- Prandtl, L.: Induced Drag of Multiplanes. TN 182, March 1924.
- Scarborough, James B.: Some Problems on the Lift and Rolling Moment of Airplane Wings. Rept. 200, 1925.
- Ames, Joseph S.: A Résumé of the Advances in Theoretical Aeronautics Made by Max M. Munk. Rept. 213, 1925.
- Blumenthal, Otto: Pressure Distribution on Joukowski Wings. TM 336, Oct. 1925.
- Panetti, M.: Recent Progress in the Theoretical Deduction of Airplane Wings. TM 338, Nov. 1925.
- Frey, Kurt: Experiments with Rotating Cylinders in Combination with Airfoils. TM 382, Sept. 1926.

- Theory Complete Wings (Cont.)
- Reid, Elliott G.: A Full-Scale Investigation of Ground Effect. Rept. 265, 1927.
- Hemke, Paul E.: Drag of Wings with End Plates. Rept. 267, 1927.
- Fairbanks, A. J.: Pressure Distribution Tests on PW-9 Wing Models Showing Effects of Biplane Interference. Rept. 271, 1927.
- Higgins, George J.: The Prediction of Airfoil Characteristics. Rept. 312, 1929.
- Durand, W. F.: A Proof of the Theorem Regarding the Distribution of Lift over the Span for Minimum Induced Drag. Rept. 349, 1929.
- Wieselsberger, C.: Theoretical Investigation of the Effect of the Ailerons on the Wing of an Airplane. TM 510, April 1929.
- Betz, A. and Petersohn E.: Contribution to the Aileron Theory. TM 542, Dec. 1929.
- Betz, A.: The Vortex Theory and Its Significance in Aviation. Part I. Vortex Theory. Part II. Wing Theory. TM 576, July 1930.
- Knight, Montgomery and Noyes, Richard W.: Span-Load Distribution as a Factor in Stability in Roll. Rept. 393, 1931.
- Arsandaux, L.: Investigation of Certain Wing Shapes with Sections Varying Progressively Along the Span. TM 617, April 1931.
- Haus, Fr.: The Use of Slots for Increasing the Lift of Airplane Wings. TM 635, Aug. 1931.
- Topfer, Carl: Lift Distribution and Longitudinal Stability of an Airplane. TM 641, Oct. 1931.
- Kuhn, Paul: Working Charts for the Determination of the Lift Distribution Between Biplane Wings. Rept. 445, 1932.
- Betz, A. and Lotz, J.: Reduction of Wing Lift by the Drag. TM 681, Aug. 1932.
- Diehl, Walter S.: Relative Loading on Biplane Wings. Rept. 458, 1933.
- Diehl, Walter S.: Relative Loading on Biplane Wings of Unequal Chords. Rept. 501, 1934.
- Wieselsberger, C.: Contribution to the Mutual Interference of Wing and Propeller. TM 754, Sept. 1934.

- Schrenk, O.: Experiments with Suction-Type Wings. TM 773, Aug. 1935.
- Lippisch, A.: Method for the Determination of the Spanwise Lift Distribution. TM 778, Oct. 1935.
- Garrick, I. E.: Potential Flow About Arbitrary Biplane Wing Sections. Rept. 542, 1936.
- Garrick, I. E.: Propulsion of a Flapping and Oscillating Airfoil. Rept. 567, 1936.
- Pearson, H. A.: Span Load Distribution for Tapered Wings with Partial-Span Flaps. Rept. 585, 1937.
- Pistolesi, E.: Ground Effect Theory and Practice. TM 828, June 1937.
- Jacobs, Eastman N. and Rhode, R. V.:
 Airfoil Section Characteristics as Applied to the Prediction of Air Forces and Their Distribution on Wings.
 Rept. 631, 1938.
- Schrenk, O.: Model Experiments on the Forces and Moments Acting on an End Plate Fitted to a Wing. TM 855, April 1938.
- Mangler, W.: The Lift Distribution of Wings with End Plates. TM 856, April 1938.
- Jones, Robert T.: Operational Treatment of the Nonuniform-Lift Theory in Airplane Dynamics. TN 667, Oct. 1938.
- Jones, Robert T.: The Unsteady Lift of a Finite Wing. TN 682, Jan. 1939.
- Kuchemann, D.: Investigation of the Lift Distribution over the Separate Wings of a Biplane. TM 889, March 1939.
- Schlichting, H.: Airfoil Theory at Supersonic Speed. TM 897, June 1939.
- Sherman, Albert: A Simple Method of Obtaining Span Load Distributions. TN 732, Oct. 1939.
- Franke, A. and Weinig, F.: The Effect of the Slipstream on an Airplane Wing. TM 920, Nov. 1939.
- Jones, Robert T.: The Unsteady Lift of a Wing of Finite Aspect Ratio. Rept. 681, 1940.
- Wetmore, J. W. and Turner, L. I., Jr.: Determination of Ground Effect from Tests of a Glider in Towed Flight. Rept. 695, 1940.
- Jones, Robert T. and Fehlner, Leo F.: Transient Effects of the Wing Wake on the Horizontal Tail. TN 771, Aug. 1940.

- Theory Complete Wings (Cont.)
- Schrenk, O.: A Simple Approximation Method for Obtaining the Spanwise Lift Distribution. TM 948, Aug. 1940.
- Schmieden, C.: Flow Around Wings Accompanied by Separation of Vortices. TM 961, Dec. 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Determination of Control-Surface Characteristics from NACA Plain-Flap and Tab Data. TN 796, Feb. 1941.
- Krienes, Klaus: The Elliptic Wing Based on the Potential Theory. TM 971, March 1941.
- Muse, Thomas C. and Neely, Robert H.:
 Wind-Tunnel Investigation of an NACA
 Low-Drag Tapered Wing with Straight
 Trailing Edge and Simple Split Flaps.
 ACR, Dec. 1941.
- Cohen, Doris: Theoretical Distribution of Load over a Swept-Back Wing. ARR (WR L-221), Oct. 1942.
- Harmon, Sidney M.: Additional Design Charts Relating to the Stalling of Tapered Wings. ARR (WR L-271), Jan. 1943.
- Swanson, Robert S. and Gillis, Clarence
 L.: Limitations of Lifting-Line Theory
 for Estimation of Aileron Hinge-Moment Characteristics. CB 3L02 (WR
 L-281), Dec. 1943.
- Hildebrand, Francis B.: A Least-Squares
 Procedure for the Solution of the Lifting-Line Integral Equation. TN 925,
 Feb. 1944.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.
- Cohen, Doris: A Method for Determining the Camber and Twist of a Surface to Support a Given Distribution of Lift. Rept. 826, 1945.
- Crane, Robert M.: Computation of Hinge-Moment Characteristics of Horizontal Tails from Section Data. CB 5B05 (WR A-11), April 1945.
- Swanson, Robert S. and Priddy, E. LaVerne: Lifting-Surface-Theory Values of the Damping in Roll and of the Parameter Used in Estimating Aileron Stick Forces. ARR L5F23 (WR L-53), Aug. 1945.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.

- Brown, Clinton E.: Theoretical Lift and Drag of Thin Triangular Wings at Supersonic Speeds. Rept. 839, 1946.
- Jones, Robert T.: Thin Oblique Airfoils at Supersonic Speed. Rept. 851, 1946.
- Jones, Robert T.: Wing Plan Forms for High-Speed Flight. Rept. 863, 1946.
- Murray, Harry E.: Wind-Tunnel Investigation of End-Plate Effects of Horizontal Tails on a Vertical Tail Compared with Available Theory. TN 1050, April 1946.
- Crandall, Stewart M.: Lifting-Surface-Theory Results for Thin Elliptic Wings of Aspect Ratio 3 with Chordwise Loadings Corresponding to 0.5-Chord Plain Flap and to Parabolic-Arc Camber. TN 1064, May 1946.
- Jones, Robert T.: Wing Planforms for High-Speed Flight. Rept. 863, 1947.
- Sivells, James C. and Neely, Robert H.:
 Method for Calculating Wing Characteristics by Lifting-Line Theory Using Nonlinear Section Lift Data. Rept. 865, 1947.
- Jones, Robert T.: Effects of Sweepback on Boundary-Layer and Separation. Rept. 884, 1947.
- Thiel, A. and Weissinger, J.: Pressure-Distribution Measurements on a Straight and on a 35° Swept-Back Tapered Wing. TM 1126, Jan. 1947.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Swanson, Robert S. and Crandall, Stewart M.: Lifting-Surface-Theory Aspect-Ratio Corrections to the Lift and Hinge-Moment Parameters for Full-Span Elevators on Horizontal Tail Surfaces. TN 1175, Feb. 1947.
- Reissner, Eric: Effect of Finite Span on the Airload Distributions for Oscillating Wings. I - Aerodynamic Theory of Oscillating Wings of Finite Span. TN 1194, March 1947.
- Busemann, Adolf: Infinitesimal Conical Supersonic Flow. TM 1100, March 1947.
- Swanson, Robert S.; Crandall, Stewart M. and Miller, Sadie: A Lifting-Surface-Theory Solution and Tests of an Elliptic Tail Surface of Aspect Ratio 3 with a 0.5-Chord 0.85-Span Elevator. TN 1275, May 1947.

- Theory Complete Wings (Cont.)
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Jones, Robert T.: Subsonic Flow over Thin Oblique Airfoils at Zero Lift. TN 1340, June 1947.
- Jacobs, W.: Pressure-Distribution Measurements on Unyawed Swept-Back Wings. TM 1164, July 1947.
- Evvard, John C.: Distribution of Wave Drag and Lift in the Vicinity of Wing Tips at Supersonic Speeds. TN 1382, July 1947.
- Weinig, F.: Lift and Drag of Wings with Small Span. TM 1151, Aug. 1947.
- Heaslet, Max A.; Lomax, Harvard and Jones, Arthur L.: Volterra's Solution of the Wave Equation as Applied to Three-Dimensional Supersonic Airfoil Problems. TN 1412, Aug. 1947.
- Jones, Arthur L.; Flanagan, Mildred G. and Sluder, Loma: An Application of Lifting-Surface Theory to the Prediction of Angle-of-Attack Hinge-Moment Parameters for Aspect Ratio 4.5 Wings. TN 1420, Aug. 1947.
- Sivells, James C.: Experimental and Calculated Characteristics of Three Wings of NACA 64-210 and 65-210 Airfoil Sections with and Without 2° Washout. TN 1422, Aug. 1947.
- Evvard, John C.: The Effects of Yawing Thin Pointed Wings at Supersonic Speeds. TN 1429, Sept. 1947.
- Reissner, Eric and Stevens, John E.: Effect of Finite Span on the Airload Distributions for Oscillating Wings. II Methods of Calculation and Examples of Application. TN 1195, Oct. 1947.
- Harmon, Sidney M.: Theoretical Supersonic Wave Drag of Untapered Sweptback and Rectangular Wings at Zero Lift. TN 1449, Oct. 1947.
- Van Dorn, Nicholas H. and DeYoung, John: A Comparison of Three Theoretical Methods of Calculating Span Load Distribution on Swept Wings. TN 1476, Nov. 1947.
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.

- Nielsen, Jack N.: Effect of Aspect Ratio and Taper on the Pressure Drag at Supersonic Speeds of Unswept Wings at Zero Lift. TN 1487, Nov. 1947.
- DeYoung, John: Theoretical Additional Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1491, Dec. 1947.
- Heaslet, Max. A. and Lomax, Harvard: The Use of Source-Sink and Doublet Distributions Extended to the Solution of Arbitrary Boundary Value Problems in Supersonic Flow. TN 1515, Jan. 1948.
- Jones, Arthur L. and Sluder, Loma: An Application of Falkner's Surface-Loading Method to Prediction of Hinge-Moment Parameters for Swept-back Wings. TN 1506, Feb. 1948.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Jones, Arthur L. and Alksne, Alberta: The Damping Due to Roll of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1548, March 1948.
- Moeckel, W. E.: Effect of Yaw at Supersonic Speeds on Theoretical Aerodynamic Coefficients of Thin Pointed Wings with Several Types of Trailing Edge. TN 1549, March 1948.
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. I Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 3. RM A7K24, April 1948.
- Brown, Clinton E. and Adams, Mac C.:
 Damping in Pitch and Roll of Triangular Wings at Supersonic Speeds.
 TN 1566, April 1948.
- Diederich, Franklin W.: A Simple Approximate Method for Obtaining Spanwise Lift Distributions over Swept Wings. RM L7107, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Evvard, John C.: Theoretical Distribution of Lift on Thin Wings at Supersonic Speeds (An Extension). TN 1585, May 1948.

- Theory Complete Wings (Cont.)
- Heaslet, Max A. and Lomax, Harvard: The Calculation of Downwash Behind Supersonic Wings with an Application to Triangular Plan Forms. TN 1620, June 1948.
- Spreiter, John R.: Aerodynamic Properties of Slender Wing-Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1662, July 1948.
- Margolis, Kenneth: Supersonic Wave Drag of Nonlifting Sweptback Tapered Wings with Mach Lines Behind the Line of Maximum Thickness. TN 1672, Aug. 1948.
- Cohen, Clarence B. and Evvard, John C.: Graphical Method of Obtaining Theoretical Lift Distributions on Thin Wings at Supersonic Speeds. TN 1676, Aug. 1948.
- Mirels, Harold: Theoretical Wave Drag and Lift of Thin Supersonic Ring Airfoils. TN 1678, Aug. 1948.
- Lagerstrom, P. A.: Linearized Supersonic Theory of Conical Wings. TN 1685, Aug. 1948.
- Moeckel, W. E. and Evvard, J. C.: Load Distributions Due to Steady Roll and Pitch for Thin Wings at Supersonic Speeds. TN 1689, Aug. 1948.
- Bollech, Thomas V.: Experimental and Calculated Characteristics of Several High-Aspect-Ratio Tapered Wings Incorporating NACA 44-Series, 230-Series, and Low-Drag 64-Series Airfoil Sections. TN 1677, Sept. 1948.
- Evvard, John C.: A Linearized Solution for Time-Dependent Velocity Potentials Near Three-Dimensional Wings at Supersonic Speeds. TN 1699, Sept. 1948.
- Jones, Arthur L.; Spreiter, John R. and Alksne, Alberta: The Rolling Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1700, Sept. 1948.
- Toll, Thomas A. and Schneiter, Leslie E.:
 Approximate Relations for HingeMoment Parameters of Control Surfaces on Swept Wings at Low Mach
 Numbers. TN 1711, Oct. 1948.
- Cohen, Clarence B.: Influence of Leading-Edge Suction on Lift-Drag Ratios of Wings at Supersonic Speeds. TN 1718, Oct. 1948.

- Queijo, M. J. and Jaquet, Byron M.: Calculated Effects of Geometric Dihedral on the Low-Speed Rolling Derivatives of Swept Wings. TN 1732, Oct. 1948.
- Murray, Harry E.: Comparison with Experiment of Several Methods of Predicting the Lift of Wings in Subsonic Compressible Flow. TN 1739, Oct. 1948.
- Ivey, H. Reese and Morrissette, Robert R.:
 An Approximate Determination of the
 Lift of Slender Cylindrical Bodies and
 Wing-Body Combinations at Very High
 Supersonic Speeds. TN 1740, Oct.
 1948.
- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.
- Mirels, Harold: Theoretical Method for Solution of Aerodynamic Forces on Thin Wings in Nonuniform Supersonic Stream with an Application to Tail Surfaces. TN 1736, Nov. 1948.
- Stevens, Victor I.: Theoretical Basic Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1772, Dec. 1948.
- Nielsen, Jack N. and Perkins, Edward W.: Charts for the Conical Part of the Downwash Field of Swept Wings at Supersonic Speeds. TN 1780, Dec. 1948.
- Malvestuto, Frank S., Jr. and Margolis, Kenneth: Theoretical Stability Derivatives of Thin Sweptback Wings Tapered to a Point with Sweptback or Sweptforward Trailing Edges for a Limited Range of Supersonic Speeds. TN 1761, Jan. 1949.
- Margolis, Kenneth: Effect of Thickness on the Lateral Force and Yawing Moment of a Sideslipping Delta Wing at Supersonic Speeds. TN 1798, Jan. 1949.
- Lomax, Harvard and Sluder, Loma: Downwash in the Vertical and Horizontal Planes of Symmetry Behind a Triangular Wing in Supersonic Flow. TN 1803, Jan. 1949.
- Baldwin, Barrett S., Jr.: Triangular Wings Cambered and Twisted to Support Specified Distributions of Lift at Supersonic Speeds. TN 1816, Feb. 1949.
- Heaslet, Max. A.; Lomax, Harvard and Spreiter, John R.: Linearized Compressible-Flow Theory for Sonic Flight Speeds. TN 1824, March 1949.

- Theory Complete Wings (Cont.)
- Bird, John D.: Some Theoretical Low-Speed Span Loading Characteristics of Swept Wings in Roll and Sideslip. TN 1839, March 1949.
- Heaslet, Max. A. and Lomax, Harvard: The Application of Green's Theorem to the Solution of Boundary-Value Problems in Linearized Supersonic Wing Theory. TN 1767, April 1949.
- Jones, Arthur L. and Alksne, Albert: The Yawing Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1850, April 1949.
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.
- Polhamus, Edward C.: A Simple Method of Estimating the Subsonic Lift and Damping in Roll of Sweptback Wings. TN 1862, April 1949.
- Malvestuto, Frank S., Jr.; Margolis, Kenneth and Ribner, Herbert S.: Theoretical Lift and Damping in Roll of Thin Sweptback Wings of Arbitrary Taper and Sweep at Supersonic Speeds. Subsonic Leading Edges and Supersonic Trailing Edges. TN 1860, April 1949.
- Spreiter, John R.: Aerodynamic Properties of Cruciform-Wing and Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1897, June 1949.
- Mirels, Harold and Haefeli, Rudolph C.: Line-Vortex Theory for Calculation of Supersonic Downwash. TN 1925, Aug. 1949.
- Goodman, Alex and Adair, Glenn H.: Estimation of the Damping in Roll of Wings Through the Normal Flight Range of Lift Coefficient. TN 1924, July 1949.
- Nielsen, Jack N. and Matteson, Frederick H.: Calculative Method for Estimating the Interference Pressure Field at Zero Lift on a Symmetrical Swept-Back Wing Mounted on a Circular Cylindrical Body. RM A9E19, Aug. 1949.

WING VARIABLES (1.2.2.2)

- Norton, F. H.: The Effect of Staggering a Biplane. TN 70, Sept. 1921.
- Norton, F. H.: An Investigation on the Effect of Raked Wing Tips. TN 69, Nov. 1921.

- Zahm, A. F.; Bear, R. M. and Hill, G. C.: Lift and Drag Effects of Wing-Tip Rake. Rept. 140, 1922.
- Munk, Max M.: General Biplane Theory. Rept. 151, 1922.
- Munk, Max M.: The Twisted Wing with Elliptical Plan Form. TN 109, Aug. 1922.
- Higgins, George J.: The Comparison of Well-Known and New Wing Sections Tested in the Variable Density Wind Tunnel. TN 219, May 1925.
- Panetti, M.: Recent Progress in the Theoretical Deduction of Airplane Wings. TM 338, Nov. 1925.
- Munk, Max M.: The Air Forces on a Systematic Series of Biplane and Triplane Cellule Models. Rept. 256, 1927.
- Rhode, R. V.: Pressure Distribution on Wing Ribs of the VE-7 and TS Airplanes in Flight. TN 267, Oct. 1927.
- Mock, Richard M.: The Distribution of Loads Between the Wings of a Biplane Having Decalage. TN 269, Nov. 1927.
- Shoemaker, James M.: Preliminary Biplane Tests in the Variable Density Wind Tunnel. TN 289, June 1928.
- Durand, W. F.: A Proof of the Theorem Regarding the Distribution of Lift over the Span for Minimum Induced Drag. Rept. 349, 1929.
- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models. I. Effects of Changes in Stagger and Gap. TN 310, July 1929.
- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models. II. Effects of Changes in Decalage, Dihedral, Sweepback and Overhang. TN 325, Oct. 1929.
- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models. III. Effects of Changes in Various Combinations of Stagger, Gap, Sweepback, and Decalage. TN 330, Dec. 1929.
- Knight, Montgomery and Noyes, Richard W.: Span Load Distribution on Two Monoplane Wing Models as Affected by Twist and Sweepback. TN 346, July 1930.
- Arsandaux, L.: Investigation of Certain Wing Shapes with Sections Varying Progressively Along the Span. TM 617, April 1931.

- Kuhn, Paul: Working Charts for the Determination of the Lift Distribution Between Biplane Wings. Rept. 445, 1932.
- Betz, A. and Lotz, J.: Reduction of Wing Lift by the Drag. TM 681, Aug. 1932.
- Weick, Fred E. and Sanders, Robert: Wind-Tunnel Tests on Combinations of a Wing with Fixed Auxiliary Airfoils Having Various Chords and Profiles. Rept. 472, 1933.
- Anderson, Raymond F.: Charts for Determining the Pitching Moment of Tapered Wings with Sweepback and Twist. TN 483, Dec. 1933.
- Diehl, Walter S.: Relative Loading on Biplane Wings of Unequal Chords. Rept. 501, 1934.
- Shortal, Joseph A.: Effect of Tip Shape and Dihedral on Lateral-Stability Characteristics. Rept. 548, 1935.
- Dätwyler, G.: Calculations of the Effect of Wing Twist on the Air Forces Acting on a Monoplane Wing. TN 520, March 1935.
- Bamber, M. J. and House, R. O.: Spinning Characteristics of Wings. III - A Rectangular and a Tapered Clark Y Monoplane Wing with Rounded Tips. TN 612, Sept. 1937.
- Donely, Philip: An Experimental Investigation of the Normal Acceleration of an Airplane Model in a Gust. TN 706, May 1939.
- Martinov, A. and Kolosov, E.: Some Data on the Static Longitudinal Stability and Control of Airplanes (Design of Control Surfaces). TM 941, May 1940.
- Jones, Robert T.: Notes on the Stability and Control of Tailless Airplanes. TN 837, Dec. 1941.
- Fairbanks, Richard W. and Alexander, Sidney R.: Wind-Tunnel Tests of Two Tapered Wings with Straight Leading Edges and with Constant-Chord Center Sections of Different Spans. ARR 3J28 (WR L-311), Oct. 1943.
- Hildebrand, Francis B.: A Least-Squares Procedure for the Solution of the Lifting-Line Integral Equation. TN 925, Feb. 1944.
- Hildebrand, Francis B. and Reissner, Eric: The Influence of the Aerodynamic Span Effect on the Magnitude of the Torsional-Divergence Velocity and on the Shape of the Corresponding Deflection Mode. TN 926, Feb. 1944.

- Pitkin, Marvin and Maggin, Bernard:
 Analysis of Factors Affecting Net Lift
 Increment Attainable with TrailingEdge Split Flaps on Tailless Airplanes.
 ARR L4I18 (WR L-164), Sept. 1944.
- Gilruth, R. R. and Wetmore, J. W.: Preliminary Tests of Several Airfoil Models in the Transonic Speed Range. ACR L5E08, May 1945.
- Wallace, Arthur R.; Rossi, Peter F. and Wells, Evalyn, G.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Statis Longitudinal Stability Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1239, April 1947.
- Lange, Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. TM 1146, June 1947.
- Murray, Harry E. and Wells, Evalyn G.: Wind-Tunnel Investigation of the Effect of Wing-Tip Fuel Tanks on Characteristics of Unswept Wings in Steady Roll. TN 1317, June 1947.
- Rolls, L. Stewart: Comparison Between Flight Measured and Calculated Span Load Distribution at High Mach Numbers. RM A7G17, Nov. 1947.
- Lagerstrom, P. A.: Linearized Supersonic Theory of Conical Wings. TN 1685, Aug. 1948.
- Tucker, Warren A. and Nelson, Robert L.: The Flexible Rectangular Wing in Roll at Supersonic Flight Speeds. TN 1769, Dec. 1948.
- Göthert and Röber: Systematic Investigations of the Effects of Plan Form and Gap Between the Fixed Surface and Control Surface on Simple Flapped Wings. TM 1206, May 1949.
- Dupleich, Paul: Rotation in Free Fall of Rectangular Wings of Elongated Shape. TM 1201, April 1949.
- Profiles (1.2.2.2.1)
- Gorrell, Edgar S. and Martin, H. S.: Aerofoils and Aerofoil Structural Combinations. Rept. 18, 1917.
- Aerodynamic Characteristics of Aerofoils.
 II. By NACA. Rept. 124, 1921.
- Norton, F. H.: The Factors that Determine the Minimum Speed on an Airplane. TN 54, March 1921.
- Norton, F. H. and Bacon, D. L.: Pressure Distribution over Thick Aerofoils--Model Tests. Rept. 150, 1922.

- Profiles Complete Wings (Cont.)
- Norton, F. H. and Bacon, D. L.: The Aerodynamic Properties of Thick Airfoils. II. Rept. 152, 1922.
- Diehl, W. S.: Center of Pressure Coefficients for Aerofoils at High Speeds. TN 25, April 1922.
- Margoulis, W.: Joukowski Wings. TM 78, April 1922.
- Toussaint, A.: Effect of Changing the Mean Camber of an Airfoil Section. TM 252, March 1924.
- Toussaint, A.: New Application of Principle of Variable-Camber Airfoil-(Lachassagne system). TM 258, April 1924.
- Fairbanks, A. J.: Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. Rept. 254, 1927.
- Shoemaker, James M.: Air Force Tests of Sperry Messenger Model with Six Sets of Wings. Rept. 269, 1927.
- Ackeret, J.: Drag Measurements of Two Thin Wing Sections at Different Index Values. TM 417, June 1927.
- Knight, Montgomery and Bamber, Millard J.: Preliminary Report on the Flat-Top Lift Curve as a Factor in Control at Low Speed. TN 297, Sept. 1928.
- Knight, Montgomery and Wenzinger, Carl J.: Wind Tunnel Tests on a Series of Wing Models Through a Large Angle of Attack Range. I -Force Tests. Rept. 317, 1929.
- Wood, Donald H.: Tests of Large Airfoils in the Propeller Research Tunnel, Including Two with Corrugated Surfaces. Rept. 336, 1929.
- Weick, Fred E.: Tests of Four Racing Type Airfoils in the Twenty-Foot Propeller Research Tunnel. TN 317, Sept. 1929.
- Jacobs, Eastman N.; Stack, John and Pinkerton, Robert M.: Airfoil Pressure Distribution Investigation in the Variable Density Wind Tunnel. Rept. 353, 1930.
- Jacobs, Eastman N.: The Aerodynamic Characteristics of Eight Very Thick Airfoils from Tests in the Variable Density Wind Tunnel. Rept. 391, 1931.
- Knight, Montgomery and Noyes, Richard W.: Span-Load Distribution as a Factor in Stability in Roll. Rept. 393, 1931.

- Ward, Kenneth E.: The Effect of Small Variations in Profile of Airfoils. TN 361, Jan. 1931.
- Anderson, Raymond F.: The Aerodynamic Characteristics of Three Tapered Airfoils Tested in the Variable Density Wind Tunnel. TN 367, Feb. 1931.
- Jacobs, Eastman N.: Tests of Six Symmetrical Airfoils in the Variable Density Wind Tunnel. TN 385, July 1931.
- Pinkerton, Robert M.: Effect of Nose Shape on the Characteristics of Symmetrical Airfoils. TN 386, Aug. 1931.
- Defoe, George L.: A Comparison of the Aerodynamic Characteristics of Three Normal and Three Reflexed Airfoils in the Variable Density Wind Tunnel. TN 388, Aug. 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 43 and 63. TN 391, Sept. 1931.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 45 and 65. TN 392, Sept. 1931.
- Anderson, Raymond F.: The Aerodynamic Characteristics of Six Commonly Used Airfoils over a Large Range of Positive and Negative Angles of Attack. TN 397, Nov. 1931.
- Jacobs, Eastman N. and Ward, Kenneth E.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 24. TN 404, Jan. 1932.
- Anderson, Raymond F.: The Aerodynamic Characteristics of Airfoils at Negative Angles of Attack. TN 412, March 1932.
- Jacobs, Eastman N.: Characteristics of Two Sharp-Nosed Airfoils Having Reduced Spinning Tendencies. TN 416, April 1932.
- Weick, Fred E. and Scudder, Nathan F.: The Effect of Lift, Drag, and Spinning Characteristics of Sharp Leading Edges on Airplane Wings. TN 447, Feb. 1933.
- Flight, Vol. XXV, No. 40, October 5, 1933: The Ugo Antoni Wing. MP 38, Nov. 1933.
- Anderson, Raymond F.: Charts for Determining the Pitching Moment of Tapered Wings with Sweepback and Twist. TN 483, Dec. 1933.

- Profiles Complete Wings (Cont.)
- Anderson, Raymond F.: Tests of Three Tapered Airfoils Based on the NACA 2200, the NACA-M6, and the Clark Y Sections. TN 487, Jan. 1934.
- Jacobs, Eastman N. and Ward, Kenneth E.: Interference of Wing and Fuselage from Tests of 209 Combinations in the NACA Variable-Density Tunnel. Rept. 540, 1935.
- Anderson, Raymond F.: Determination of the Characteristics of Tapered Wings. Rept. 572, 1936.
- Jacobs, Eastman N. and Pinkerton, Robert M.: Tests of NACA Airfoils in the Variable-Density Wind Tunnel. Series 230. TN 567, May 1936.
- Goett, Harry J. and Bullivant, W. Kenneth: Tests of NACA 0009, 0012, and 0018 Airfoils in the Full-Scale Tunnel. Rept. 647, 1938.
- Jones, Robert T.: Correction of the Lifting-Line Theory for the Effect of the Chord. TN 817, July 1941.
- Nissen, J. M. and White, M. D.: Flight Investigation of Wing-Gun Fairings on a Fighter Type Airplane. ACR (WR L-247), Oct. 1941.
- Sivells, James C.: Tests in the 19-Foot Pressure Tunnel of a Rectangular NACA 0012 Horizontal Tail Plane with Plain and Horn-Balanced Elevators. ARR, Oct. 1942.
- Gillis, Clarence L.: Characteristics of Beveled-Trailing-Edge Elevators on a Typical Pursuit Fuselage at Attitudes Simulating Normal Flight and Spin Conditions. ARR (WR L-391), Dec. 1942.
- Ganzer, Victor M.: The Effects of a Highly Cambered Low-Drag Wing and of Auxiliary Flaps on the High-Speed Aerodynamic Characteristics of a Twin-Engine Pursuit Airplane Model. CMR (WR A-90), Feb. 1944.
- Hall, Charles F. and Mannes, Robert L.:
 Longitudinal Characteristics and
 Aileron Effectiveness of the XB-42
 Airplane from High-Speed WindTunnel Tests. CMR (WR A-84), Sept.
 1944.
- Garner, I. Elizabeth: Wind-Tunnel Investigation of Control-Surface Characteristics. XX Plain and Balanced Flaps on an NACA 0009 Rectangular Semispan Tail Surface. ARR L4I11f (WR L-186), Oct. 1944.

- Cohen, Doris: A Method for Determining the Camber and Twist of a Surface to Support a Given Distribution of Lift. Rept. 826, 1945.
- Pearson, E. O., Jr.; Evans, A. J. and West, F. E., Jr.: Effects of Compressibility on the Maximum Lift Characteristics and Spanwise Load Distribution of a 12-Foot-Span Fighter-Type Wing of NACA 230-Series Airfoil Sections. ACR L5G10 (WR L-51), Nov. 1945.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Beeler, De E. and Gerard, George: Wake Measurements Behind a Wing Section of a Fighter Airplane in Fast Dives. TN 1190, March 1947.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. TM 1146, June 1947.
- Sivells, James C.: Experimental and Calculated Characteristics of Three Wings of NACA 64-210 and 65-210 Airfoil Sections with and Without 2° Washout. TN 1422, Aug. 1947.
- Harmon, Sidney M.: Theoretical Supersonic Wave Drag of Untapered Sweptback and Rectangular Wings at Zero Lift. TN 1449, Oct. 1947.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Sivells, James C. and Spooner, Stanley H.: Investigation in the Langley 19-Foot Pressure Tunnel of Two Wings of NACA 65-210 and 64-210 Airfoil Sections with Various Type Flaps. TN 1579, May 1948.
- Bollech, Thomas V.: Experimental and Calculated Characteristics of Several High-Aspect-Ratio Tapered Wings Incorporating NACA 44-Series, 230-Series, and Low-Drag 64-Series Airfoil Sections. TN 1677, Sept. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.

- Profiles Complete Wings (Cont.)
- Fischel, Jack and Vogler, Raymond D.:
 High-Lift and Lateral Control Characteristics of an NACA 652-215 Semispan
 Wing Equipped with Plug and Retractable Ailerons and a Full-Span Slotted
 Flap. TN 1872, April 1949.

Aspect Ratio (1.2.2.2.2)

- Betz, A.: Influence of Span and Load Per Square Meter on the Air Forces of the Supporting Surface. TN 41, March 1921.
- Norton, F. H.: The Factors that Determine the Minimum Speed of an Airplane. TN 54, March 1921.
- Prepared by Paris Office, NACA: Some New Tests at the Gottingen Laboratory. TM 16, April 1921.
- Norton, F. H. and Brown, W. G.: Pressure Distribution over the Rudder and Fin of an Airplane in Flight. Rept. 149, 1922.
- Diehl, Walter S.: Effect of Aerofoil Aspect Ratio on the Slope of the Lift Curve. TN 79, Jan. 1922.
- Reid, Elliott G.: The Effects of Shielding the Tips of Airfoils. Rept. 201, 1925.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind Tunnel Force Tests in Wing Systems Through Large Angles of Attack. TN 294, Aug. 1928.
- Knight, Montgomery and Wenzinger, Carl J.: Wind Tunnel Tests on a Series of Wing Models Through a Large Angle of Attack Range. I - Force Tests. Rept. 317, 1929.
- Zimmerman, C. H.: Characteristics of Clark Y Airfoils of Small Aspect Ratios. Rept. 431, 1932.
- Jacobs, Eastman N. and Anderson, Raymond F.: Large-Scale Aerodynamic Characteristics of Airfoils as Tested in the Variable Density Wind Tunnel. Rept. 352, 1933.
- Zimmerman, C. H.: Aerodynamic Characteristics of Several Airfoils of Low Aspect Ratio. TN 539, Aug. 1935.
- Anderson, Raymond F.: Determination of the Characteristics of Tapered Wings. Rept. 572, 1936.
- Winter, H.: Flow Phenomena on Plates and Airfoils of Short Span. TM 798, July 1936.

- Pearson, H. A.: Span Load Distribution for Tapered Wings with Partial-Span Flaps. Rept. 585, 1937.
- Parsons, John F. and Silverstein, Abe: Full-Scale Span Load Distribution on a Tapered Wing with Split Flaps of Various Spans. TN 591, Feb. 1937.
- Pistolesi, E.: Ground Effect Theory and Practice. TM 828, June 1937.
- Silverstein, Abe and Katzoff, S.: Aerodynamic Characteristics of Horizontal Tail Surfaces. Rept. 688, 1940.
- Soulé, H. A. and Anderson, R. F.: Design Charts Relating to the Stalling of Tapered Wings. Rept. 703, 1940.
- Gothert, B.: Effect of Wing Loading, Aspect Ratio, and Span Loading on Flight Performances. TM 925, Jan. 1940.
- Mutterperl, William: The Calculation of Span Load Distributions on Swept-Back Wings. TN 834, Dec. 1941.
- Sivells, James C.: Tests in the 19-Foot Pressure Tunnel of a Rectangular NACA 0012 Horizontal Tail Plane with Plain and Horn-Balance Elevators. ARR, Oct. 1942.
- Bamber, M. J.: Effect of Changes in Aspect Ratio, Side Area, Flight-Path Angle, and Normal Acceleration on Lateral Stability. ARR (WR L-403), Dec. 1942.
- Stack, John and Lindsey, W. F.: Characteristics of Low-Aspect-Ratio Wings at Supercritical Mach Numbers. ACR L5J16, Oct. 1945.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.
- Brown, Clinton E.: Theoretical Lift and Drag of Thin Triangular Wings at Supersonic Speeds. Rept. 839, 1946.
- Letko, William and Goodman, Alex: Preliminary Wind-Tunnel Investigation at Low Speed of Stability and Control Characteristics of Swept-Back Wings. TN 1046, April 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Shortal, Joseph A. and Maggin, Bernard: Effect of Sweepback and Aspect Ratio on Longitudinal Stability Characteristics of Wings at Low Speeds. TN 1093, July 1946.

- Aspect Ratio Complete Wings (Cont.)
- Gothert, B.: Plane and Three-Dimensional Flow at High Subsonic Speeds. TM 1105, Oct. 1946.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Swanson, Robert S. and Crandall, Stewart M.: Lifting-Surface-Theory Aspect-Ratio Corrections to the Lift and Hinge-Moment Parameters for Full-Span Elevators on Horizontal Tail Surfaces. TN 1175, Feb. 1947.
- Ellis, Macon C., Jr. and Hasel, Lowell E.: Preliminary Tests at Supersonic Speeds of Triangular and Swept-Back Wings. RM L6L17, Feb. 1947.
- Hunter, P. A. and Vensel, J. R.: A Flight Investigation to Increase the Safety of a Light Airplane. TN 1203, March 1947.
- Neely, Robert H.; Bollech, Thomas V.; Westrick, Gertrude C. and Graham, Robert R.: Experimental and Calculated Characteristics of Several NACA 44-Series Wings with Aspect Ratios of 8, 10, and 12 and Taper Ratios of 2.5 and 3.5. TN 1270, May 1947.
- Lowry, John G. and Schneiter, Leslie E.: Investigation at Low Speed of the Longitudinal Stability Characteristics of a 60° Swept-Back Tapered Low-Drag Wing. TN 1284, May 1947.
- Bates, William R.: Collection and Analysis of Wind-Tunnel Data on the Characteristics of Isolated Tail Surfaces with and Without End Plates. TN 1291, May 1947.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Harmon, Sidney M. and Swanson, Margaret D.: Calculations of the Supersonic Wave Drag of Nonlifting Wings with Arbitrary Sweepback and Aspect Ratio Wings Swept Behind the Mach Lines. TN 1319, May 1947.
- Hieser, Gerald: Tuft Studies of the Flow over a Wing at Four Angles of Sweep. RM L7C05a, July 1947.
- Letko, William and Feigenbaum, David: Wind-Tunnel Investigation of Split Trailing-Edge Lift and Trim Flaps on a Tapered Wing with 23° Sweepback. TN 1352, July 1947.

- Lange/Wacke: Test Report on Measurements on a Series of Tapered Wings of Small Aspect Ratio (Trapezoidal Wing with Fuselage). TM 1129, July 1947.
- Heaslet, Max A.; Lomax, Harvard and Jones, Arthur L.: Volterra's Solution of the Wave Equation as Applied to Three-Dimensional Supersonic Airfoil Problems. TN 1412, Aug. 1947.
- Jones, Arthur L.; Flanagan, Mildred G. and Sluder, Loma: An Application of Lifting-Surface Theory to the Prediction of Angle-of-Attack Hinge-Moment Parameters for Aspect Ratio 4.5 Wings. TN 1420, Aug. 1947.
- Weinig, F.: Lift and Drag of Wings with Small Span. TM 1151, Aug. 1947.
- Margolis, Kenneth: Supersonic Wave Drag of Sweptback Tapered Wings at Zero Lift. TN 1448, Oct. 1947.
- Harmon, Sidney M.: Theoretical Supersonic Wave Drag of Untapered Sweptback and Rectangular Wings at Zero Lift. TN 1449, Oct. 1947.
- Tosti, Louis P.: Low-Speed Static Stability and Damping-in-Roll Characteristics of Some Swept and Unswept Low-Aspect-Ratio Wings. TN 1468, Oct. 1947.
- Nielsen, Jack N.: Effect of Aspect Ratio and Taper on the Pressure Drag at Supersonic Speeds of Unswept Wings at Zero Lift. TN 1487, Nov. 1947.
- DeYoung, John: Theoretical Additional Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1491, Dec. 1947.
- Jones, Arthur L. and Sluder, Loma: An Application of Falkner's Surface-Loading Method to Prediction of Hinge-Moment Parameters for Swept-back Wings. TN 1506, Feb. 1948.
- Lovell, Powell M., Jr.: The Effect of Wing Bending Deflection on the Rolling Moment Due to Sideslip. TN 1541, Feb. 1948.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Jones, Arthur L. and Alksne, Alberta: The Damping Due to Roll of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1548, March 1948.

- Aspect Ratio Complete Wings (Cont.)
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Brown, Clinton E. and Adams, Mac C.: Damping in Pitch and Roll of Triangular Wings at Supersonic Speeds. TN 1566, April 1948.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. (Partial Report: Triangular Wing.) TM 1176, May 1948.
 Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for
- Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- McKinney, Marion O., Jr. and Shanks, Robert E.: Lateral Stability and Control Characteristics of a Free-Flying Model Having an Unswept Wing with an Aspect Ratio of 2. TN 1658, July 1948.
- Stack, John and Lindsey, W. F.: Characteristics of Low-Aspect-Ratio Wings at Supercritical Mach Numbers. TN 1665, Aug. 1948.
- Goodman, Alex and Brewer, Jack D.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Static and Yawing Stability Derivatives of Untapered Wings. TN 1669, Aug. 1948.
- Margolis, Kenneth: Supersonic Wave Drag of Nonlifting Sweptback Tapered Wings with Mach Lines Behind the Line of Maximum Thickness. TN 1672, Aug.
- Bollech, Thomas V.: Experimental and Calculated Characteristics of Several High-Aspect-Ratio Tapered Wings Incorporating NACA 44-Series, 230-Series, and Low-Drag 64-Series Airfoil Sections. TN 1677, Sept. 1948.
- Jones, Arthur L.; Spreiter, John R. and Alksne, Alberta: The Rolling Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1700, Sept. 1948.
- Hoggard, H. Page, Jr. and Hagerman, John R.: Downwash and Wake Behind Untapered Wings of Various Aspect Ratios and Angles of Sweep. TN 1703, Oct. 1948.
- Toll, Thomas A. and Schneiter, Leslie E.: Approximate Relations for Hinge-Moment Parameters of Control Surfaces on Swept Wings at Low Mach Numbers. TN 1711, Oct. 1948.

- Queijo, M. J. and Jaquet, Byron M.: Calculated Effects of Geometric Dihedral on the Low-Speed Rolling Derivatives of Swept Wings. TN 1732, Oct. 1948.
- Murray, Harry E.: Comparison with Experiment of Several Methods of Predicting the Lift of Wings in Subsonic Compressible Flow. TN 1739, Oct.
- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.
- Stevens, Victor I.: Theoretical Basic Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1772, Dec. 1948.
- Malvestuto, Frank S., Jr. and Margolis, Kenneth: Theoretical Stability Derivatives of Thin Sweptback Wings Tapered to a Point with Sweptback or Sweptforward Trailing Edges for a Limited Range of Supersonic Speeds. TN 1761, Jan. 1949.
- Hess, Robert V. and Gardner, Clifford S .: Study by the Prandtl-Glauert Method of Compressibility Effects and Critical Mach Number for Ellipsoids of Various Aspect Ratios and Thickness Ratios. TN 1792, Jan. 1949.
- Margolis, Kenneth: Effect of Thickness on the Lateral Force and Yawing Moment of a Sideslipping Delta Wing at Supersonic Speeds. TN 1798, Jan. 1949.
- Goodman, Alex and Fisher, Lewis R.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Rolling Stability Derivatives of Untapered Wings. TN 1835, March 1949.
- Bird, John D.: Some Theoretical Low-Speed Span Loading Characteristics of Swept Wings in Roll and Sideslip. TN 1839, March 1949.
- Jones, Arthur L. and Alksne, Alberta: The Yawing Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1850, April 1949.
- Polhamus, Edward C.: A Simple Method of Estimating the Subsonic Lift and Damping in Roll of Sweptback Wings. TN 1862, April 1949.
- Göthert and Röber: Systematic Investigations of the Effects of Plan Form and Gap Between the Fixed Surface and Control Surface on Simple Flapped Wings. TM 1206, May 1949.

- Aspect Ratio Complete Wings (Cont.)
- Dupleich, Paul: Rotation in Free Fall of Rectangular Wings of Elongated Shape. TM 1201, April 1949.
- Malvestuto, Frank S., Jr.; Margolis, Kenneth and Ribner, Herbert S.: Theoretical Lift and Damping in Roll of Thin Sweptback Wings of Arbitrary Taper and Sweep at Supersonic Speeds. Subsonic Leading Edges and Supersonic Trailing Edges. TN 1860, April 1949.
- Watkins, Charles E.: Effect of Aspect Ratio on Undamped Torsional Oscillations of a Thin Rectangular Wing in Supersonic Flow. TN 1895, June 1949.
- Tucker, Warren A. and Nelson, Robert L.: The Effect of Torsional Flexibility on the Rolling Characteristics at Supersonic Speeds of Tapered Unswept Wings. TN 1890, June 1949.
- Göthert, B.: Airfoil Measurements in the DVL High-Speed Wind Tunnel (2.7-Meter Diameter). TM 1240, June 1949.
- Goodman, Alex and Adair, Glenn H.:
 Estimation of the Damping in Roll of
 Wings Through the Normal Flight
 Range of Lift Coefficient. TN 1924,
 July 1949.

Sweep (1.2.2.2.3)

- Wenzinger, Carl J. and Harris, Thomas A.: Wind Tunnel Force Tests in Wing Systems Through Large Angles of Attack. TN 294, Aug. 1928.
- Muttray, H.: Investigation of the Effect of the Fuselage on the Wing of a Low-Wing Monoplane. TM 517, June 1929.
- Knight, Montgomery and Noyes, Richard W.: Span Load Distribution on Two Monoplane Wing Models as Affected by Twist and Sweepback. TN 346, July 1930.
- Knight, Montgomery and Noyes, Richard W.: Span-Load Distribution as a Factor in Stability in Roll. Rept. 393, 1931.
- Sanders, Robert: Aerodynamic Tests of a Low Aspect Ratio Tapered Wing with an Auxiliary Airfoil for Use on Tailless Airplanes. TN 477, Nov. 1933.
- Anderson, Raymond F.: Charts for Determining the Pitching Moment of Tapered Wings with Sweepback and Twist. TN 483, Dec. 1933.

- Datwyler, G.: Calculations of the Effect of Wing Twist on the Air Forces Acting on a Monoplane Wing. TN 520, March 1935.
- Wood, Donald H. and Windler, Ray: The
 Effect of Lateral Inclination of the
 Thrust Axis and of Sweepback of the
 Leading Edge of the Wing on Propulsive and Net Efficiencies of a WingNacelle-Propeller Combination. ACR,
 April 1935.
- Anderson, Raymond F.: Determination of the Characteristics of Tapered Wings. Rept. 572, 1936.
- House, Rufus O. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effect of
 Interference on Lateral-Stability
 Characteristics of Four NACA 23012
 Wings an Elliptical and a Circular
 Fuselage and Vertical Fins. Rept. 705,
 1941.
- Mutterperl, William: The Calculation of Span Load Distributions on Swept-Back Wings. TN 834, Dec. 1941.
- Muse, Thomas C. and Neely, Robert H.:
 Wind-Tunnel Investigation of an NACA
 Low-Drag Tapered Wing with Straight
 Trailing Edge and Simple Split Flaps.
 ACR, Dec. 1941.
- Cohen, Doris: A Method for Determining the Camber and Twist of a Surface to Support a Given Distribution of Lift. Rept. 826, 1945.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.
- Brown, Clinton E.: Theoretical Lift and Drag of Thin Triangular Wings at Supersonic Speeds. Rept. 839, 1946.
- Jones, Robert T.: Thin Oblique Airfoils at Supersonic Speed. Rept. 851, 1946.
- Jones, Robert T.: Wing Plan Forms for High-Speed Flight. Rept. 863, 1946.
- Letko, William and Goodman, Alex: Preliminary Wind-Tunnel Investigation at Low Speed of Stability and Control Characteristics of Swept-Back Wings. TN 1046, April 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Shortal, Joseph A. and Maggin, Bernard: Effect of Sweepback and Aspect Ratio on Longitudinal Stability Characteristics of Wings at Low Speeds. TN 1093, July 1946.

- Sweep Complete Wings (Cont.)
- Maggin, Bernard and Shanks, Robert E.: The Effect of Geometric Dihedral on the Aerodynamic Characteristics of a 40° Swept-Back Wing of Aspect Ratio 3. TN 1169, Dec. 1946.
- Jones, Robert T.: Wing Planforms for High-Speed Flight. Rept. 863, 1947.
- Jones, Robert T.: Effects of Sweepback on Boundary Layer and Separation. Rept. 884, 1947.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Ellis, Macon C., Jr. and Hasel, Lowell E.:
 Preliminary Tests at Supersonic Speeds
 of Triangular and Swept-Back Wings.
 RM L6L17, Feb. 1947.
- Göthert, B.: High-Speed Measurements on a Swept-Back Wing. TM 1102, March 1947.
- Weissinger, J.: The Lift Distribution of Swept-Back Wings. TM 1120, March 1947.
- Conner, D. William: Effect of Reflex Camber on the Aerodynamic Characteristics of a Highly Tapered Moderately Swept-Back Wing at Reynolds Numbers up to 8,000,000. TN 1212, March 1947.
- Watkins, Charles E.: The Streamline Pattern in the Vicinity of an Oblique Airfoil. TN 1231, March 1947.
- Scher, Stanley H.: Effect of 40° Sweepback on the Spin and Recovery Characteristics of a $\frac{1}{25}$ -Scale Model of a Typical Fighter-Type Airplane as Determined by Free-Spinning-Tunnel Tests. TN 1256, April 1947.
- Campbell, John P. and Drake, Hubert M.: Investigation of Stability and Control Characteristics of an Airplane Model with Skewed Wing in the Langley Free-Flight Tunnel. TN 1208, May 1947.
- Eisenstadt, Bertram J.: Boundary-Induced Upwash for Yawed and Swept-Back Wings in Closed Circular Wind Tunnels. TN 1265, May 1947.
- Bennett, Charles V. and Johnson, Joseph L.: Experimental Determination of the Damping in Roll and Aileron Rolling Effectiveness of Three Wings Having 2°, 42°, and 62° Sweepback. TN 1278, May 1947.

- Lowry, John G. and Schneiter, Leslie E.: Investigation at Low Speed of the Longitudinal Stability Characteristics of a 60° Swept-Back Tapered Low-Drag Wing. TN 1284, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Low-Speed Stability and Damping-In-Roll Characteristics of Some Highly Swept Wings. TN 1286, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Harmon, Sidney M. and Swanson, Margaret D.: Calculations of the Supersonic Wave Drag of Nonlifting Wings with Arbitrary Sweepback and Aspect Ratio Wings Swept Behind the Mach Lines. TN 1319, May 1947.
- Thiel, G. and Weissinger, F.: Six-Component Measurements on a Straight and a 35° Swept-Back Trapezoidal Wing With and Without Split Flap. TM 1107, June 1947.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. TM 1146, June 1947.
- Jones, Robert T.: Subsonic Flow over Thin Oblique Airfoils at Zero Lift. TN 1340, June 1947.
- Hieser, Gerald: Tuft Studies of the Flow over a Wing at Four Angles of Sweep. RM L7C05a, July 1947.
- Lange/Wacke: Test Report on Measurements on a Series of Tapered Wings of Small Aspect Ratio (Trapezoidal Wing with Fuselage). TM 1129, July 1947.
- Jacobs, W.: Pressure-Distribution Measurements on Unyawed Swept-Back Wings. TM 1164, July 1947.
- Jones, Robert T.: Estimated Lift-Drag Ratios at Supersonic Speed. TN 1350, July 1947.
- Mendelsohn, Robert A. and Brewer, Jack D.: Comparison Between the Measured and Theoretical Span Loadings on a Moderately Swept-Forward and a Moderately Swept-Back Semispan Wing. TN 1351, July 1947.

- Sweep Complete Wings (Cont.)
- Letko, William and Feigenbaum, David: Wind-Tunnel Investigation of Split Trailing-Edge Lift and Trim Flaps on a Tapered Wing with 23° Sweepback. TN 1352, July 1947.
- Purser, Faul E.; Spearman, M. Leroy and Bates, William R.: Preliminary Investigation at Low Speed of Downwash Characteristics of Small-Scale Sweptback Wings. TN 1378, July 1947.
- Garrick, I. E. and Rubinow, S. I.: Theoretical Study of Air Forces on an Oscillating or Steady Thin Wing in a Supersonic Main Stream. TN 1383, July 1947.
- Heaslet, Max A.; Lomax, Harvard and Jones, Arthur L.: Volterra's Solution of the Wave Equation as Applied to Three-Dimensional Supersonic Airfoil Problems. TN 1412, Aug. 1947.
- Margolis, Kenneth: Supersonic Wave Drag of Sweptback Tapered Wings at Zero Lift. TN 1448, Oct. 1947.
- Harmon, Sidney M.: Theoretical Supersonic Wave Drag of Untapered Sweptback and Rectangular Wings at Zero Lift. TN 1449, Oct. 1947.
- Tosti, Louis P.: Low-Speed Static Stability and Damping-in-Roll Characteristics of Some Swept and Unswept Low-Aspect-Ratio Wings. TN 1468, Oct. 1947.
- Van Dorn, Nicholas H. and De Young, John: A Comparison of Three Theoretical Methods of Calculating Span Load Distribution on Swept Wings. TN 1476, Nov. 1947.
- De Young, John: Theoretical Additional Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1491, Dec. 1947.
- Jones, Arthur L. and Sluder, Loma: An Application of Falkner's Surface-Loading Method to Prediction of Hinge-Moment Parameters for Swept-back Wings. TN 1506, Feb. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a 35° Sweptback Wing with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1511, Jan. 1948.
- Pierce, Harold B.: Tests of a 45° Sweptback-Wing Model in the Langley Gust Tunnel. TN 1528, Feb. 1948.

- Brennecke: Maintaining Laminar Flow in the Boundary Layer Using a Swept-Back Wing. TM 1180, Feb. 1948.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Jones, Arthur L. and Alksne, Alberta: The Damping Due to Roll of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1548, March 1948.
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. I - Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 3. RM A7K24, April 1948.
- Brown, Clinton E. and Adams, Mac C.:
 Damping in Pitch and Roll of Triangular Wings at Supersonic Speeds. TN
 1566, April 1948.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. (Partial Report: Triangular Wing). TM 1176, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Diederich, Franklin W.: A Simple Approximate Method for Obtaining Spanwise Lift Distributions over Swept Wings. RM L7107, May 1948.
- Wick, Bradford H.: Chordwise and Spanwise Loadings Measured at Low Speed on a Triangular Wing Having an Aspect Ratio of Two and an NACA 0012 Airfoil Section. TN 1650, June 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. II Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 4.5. RM A8B11, June 1948.
- Wollner, Bertram C.: Charts for Determining Preliminary Values of Span-Load, Shear, Bending-Moment, and Accumulated-Torque Distributions of Swept Wings of Various Taper Ratios. RM L8A26, July 1948.
- Letko, William and Cowan, John W.: Effect of Taper Ratio on Low-Speed Static and Yawing Stability Derivatives of 45° Sweptback Wings with Aspect Ratio of 2.61. TN 1671, July 1948.

- Sweep Complete Wings (Cont.)
- Goodman, Alex and Brewer, Jack D.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Static and Yawing Stability Derivatives of Untapered Wings. TN 1669, Aug. 1948.
- Margolis, Kenneth: Supersonic Wave Drag of Nonlifting Sweptback Tapered Wings with Mach Lines Behind the Line of Maximum Thickness. TN 1672, Aug. 1948.
- Lowry, John G. and Schneiter, Leslie E.: Estimation of Effectiveness of Flap-Type Controls on Sweptback Wings. TN 1674, Aug. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Longitudinal Stability, Stalling, and Lift Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1679, Aug. 1948.
- Diederich, Franklin W. and Budiansky, Bernard: Divergence of Swept Wings. TN 1680, Aug. 1948.
- Queijo, M. J. and Jaquet, Byron M.: Investigation of Effects of Geometric Dihedral on Low-Speed Static Stability and Yawing Characteristics of an Untapered 45° Sweptback-Wing Model of Aspect Ration 2.61. TN 1668, Sept. 1948.
- Jones, Arthur L.; Spreiter, John R. and Alksne, Alberta: The Rolling Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1700, Sept. 1948.
- Hoggard, H. Page, Jr. and Hagerman, John R.: Downwash and Wake Behind Untapered Wings of Various Aspect Ratios and Angles of Sweep. TN 1703, Oct. 1948.
- Hieser, Gerald and Whitcomb, Charles F.: Investigation of the Effects of a Nacelle on the Aerodynamic Characteristics of a Swept Wing and the Effects of Sweep on a Wing Alone. TN 1709, Oct. 1948.
- Toll, Thomas A. and Schneiter, Leslie E.: Approximate Relations for Hinge-Moment Parameters of Control Surfaces on Swept Wings at Low Mach Numbers. TN 1711, Oct. 1948.
- Pierce, Harold B.: Gust-Tunnel Investigation of a 45° Sweptforward-Wing Model. TN 1717, Oct. 1948.
- Queijo, M. J. and Jaquet, Byron M.: Calculated Effects of Geometric Dihedral on the Low-Speed Rolling Derivatives of Swept Wings. TN 1732, Oct. 1948.

- Murray, Harry E.: Comparison with Experiment of Several Methods of Predicting the Lift of Wings in Subsonic Compressible Flow. TN 1739, Oct. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Stability, Control, and Stalling Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 80-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1743, Nov. 1948.
- Polhamus, Edward C.: Jet-Boundary-Induced-Upwash Velocities for Swept Reflection-Plane Models Mounted Vertically in 7-by 10-Foot, Closed, Rectangular Wind Tunnels. TN 1752, Nov. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. III Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 6. RM A8H30, Dec. 1948.
- Malvestuto, Frank S., Jr. and Margolis, Kenneth: Theoretical Stability Derivatives of Thin Sweptback Wings Tapered to a Point with Sweptback or Sweptforward Training Edges for a Limited Range of Supersonic Speeds. TN 1761, Jan. 1949.
- Reisert, Thomas D.: Gust-Tunnel Investigation of a Wing Model with Semichord Line Swept Back 30°. TN 1794, Jan. 1949.
- McCormack, Gerald M. and Cook, Woodrow L.: A Study of Stall Phenomena on a 45° Swept-Forward Wing. TN 1797, Jan. 1949.
- Margolis, Kenneth: Effect of Thickness on the Lateral Force and Yawing Moment of a Sideslipping Delta Wing at Supersonic Speeds. TN 1798, Jan. 1949.
- Baldwin, Barrett S., Jr.: Triangular Wings Cambered and Twisted to Support Specified Distributions of Lift at Supersonic Speeds. TN 1816, Feb. 1949.
- Goodman, Alex and Fisher, Lewis R.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Rolling Stability Derivatives of Untapered Wings. TN 1835, March 1949.
- Bird, John D.: Some Theoretical Low-Speed Span Loading Characteristics of Swept Wings in Roll and Sideslip. TN 1839, March 1949.

- Sweep Complete Wings (Cont.)
- Jones, Arthur L. and Alksne, Alberta: The Yawing Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1850, April 1949.
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.
- Polhamus, Edward C.: A Simple Method of Estimating the Subsonic Lift and Damping in Roll of Sweptback Wings. TN 1862, April 1949.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. TM 1225, May 1949.
- Malvestuto, Frank S., Jr.; Margolis, Kenneth and Ribner, Herbert S.: Theoretical Lift and Damping in Roll of Thin Sweptback Wings of Arbitrary Taper and Sweep at Supersonic Speeds. Subsonic Leading Edges and Supersonic Trailing Edges. TN 1860, April 1949.
- Buschner, R.: On the Installation of Jet Engine Nacelles on a Wing. Fourth Partial Report: Pressure-Distribution Measurements on a Sweptback Wing with Jet Engine Nacelle. TM 1226, July 1949.
- Goodman, Alex and Adair, Glenn H.:
 Estimation of the Damping in Roll of
 Wings Through the Normal Flight
 Range of Lift Coefficient. TN 1924,
 July 1949.

Taper (1.2.2.2.4)

- Norton, F. H. and Bacon, D. L.: Pressure Distribution over Thick Aerofoils--Model Tests. Rept. 150, 1922.
- Norton, F. H. and Bacon, D. L.: The Aerodynamic Properties of Thick Aerofoils, II. Rept. 152, 1922.
- Prondzynski, Stephan V.: The Wing with a Pointed Tip. TM 146, Oct. 1922.
- Reid, Elliott G.: Pressure Distribution over Thick Tapered Airfoils, NACA-81, USA-27C Modified and USA-35. Rept. 229, 1926.
- Fairbanks, A. J.: Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. Rept. 254, 1927.

- Wenzinger, Carl J. and Harris, Thomas A.: Wind Tunnel Force Tests in Wing Systems Through Large Angles of Attack. TN 294, Aug. 1928.
- Wenzinger, Carl J.: Pressure Distribution over a Thick, Tapered and Twisted Monoplane Wing Model - NACA-81-J. Rept. 367, 1930.
- Amstutz, E.: Calculation of Tapered Monoplane Wings. TM 578, Aug. 1930.
- Anderson, Raymond F.: The Aerodynamic Characteristics of Three Tapered Airfoils Tested in the Variable Density Wind Tunnel. TN 367, Feb. 1931.
- Arsandaux, L.: Investigation of Certain Wing Shapes with Sections Varying Progressively Along the Span. TM 617, April 1931.
- Weick, Fred E. and Harris, Thomas A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. XI. Various
 Floating Tip Ailerons on Both Rectangular and Tapered Wings. TN 458,
 May 1933.
- Anderson, Raymond F.: Determination of the Characteristics of Tapered Wings. Rept. 572, 1936.
- Pearson, H. A.: Span Load Distribution for Tapered Wings with Partial-Span Flaps. Rept. 585, 1937.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Tapered Wings with Ordinary Ailerons and Partial-Span Split Flaps. Rept. 611, 1937.
- Pearson, H. A.: Theoretical Span Loading and Moments of Tapered Wings Produced by Aileron Deflection. TN 589, Jan. 1937.
- Pearson, H. A.: Empirical Corrections to the Span Load Distribution at the Tip. TN 606, Aug. 1937.
- Jacobs, Eastman N.: Tapered Wings, Tip Stalling, and Preliminary Results from Tests of the Stall-Control Flap. ACR (WR L-296), Nov. 1937.
- Anderson, Raymond F.: The Experimental and Calculated Characteristics of 22 Tapered Wings. Rept. 627, 1938.
- Wenzinger, Carl J. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Rectangular and Tapered NACA 23012 Wings with Plain Ailerons and Full-Span Split Flaps. TN 661, Aug. 1938.

- Taper Complete Wings (Cont.)
- House, R. O.: The Effects of Partial-Span Plain Flaps on the Aerodynamic Characteristics of a Rectangular and a Tapered Clark Y Wing. TN 663, Sept. 1938.
- Pearson, Henry A. and Anderson, Raymond F.: Calculation of the Aerodynamic Characteristics of Tapered Wings with Partial-Span Flaps. Rept. 665, 1939.
- Bamber, M. J. and House, R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. I - Four NACA 23012 Wings of Various Plan Forms With and Without Dihedral. TN 703, April 1939.
- Anderson, Raymond F.: A Comparison of Several Tapered Wings Designed to Avoid Tip Stalling. TN 713, June 1939.
- House, Rufus O.: The Effects of Partial-Span Slotted Flaps on the Aerodynamic Characteristics of a Rectangular and a Tapered NACA 23012 Wing. TN 719, July 1939.
- Soule, H. A. and Anderson, R. F.: Design Charts Relating to the Stalling of Tapered Wings. Rept. 703, 1940.
- House, Rufus O. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effect of
 Interference on Lateral-Stability
 Characteristics of Four NACA 23012
 Wings an Elliptical and a Circular
 Fuselage and Vertical Fins. Rept.
 705, 1941.
- Greenberg, Harry: Characteristics of NACA 4400R Series Rectangular and Tapered Airfoils, Including the Effect of Split Flaps. ACR (WR L-493), Jan. 1941.
- Mutterperl, William: The Calculation of Span Load Distributions on Swept-Back Wings. TN 834, Dec. 1941.
- Muse, Thomas C. and Neely, Robert H.: Wind-Tunnel Investigation of an NACA Low-Drag Tapered Wing with Straight Trailing Edge and Simple Split Flaps. ACR, Dec. 1941.
- Diehl, Walter S.: The Mean Aerodynamic Chord and the Aerodynamic Center of a Tapered Wing. Rept. 751, 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of a Plain Aileron and a Balanced Aileron on a Tapered Wing with Full-Span Duplex Flaps. ARR (WR L-481), July 1942.

- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of a Plain Aileron with Various Trailing-Edge Modifications on a Tapered Wing. I - Aileron with Fixed Inset Tabs. ARR (WR L-513), Sept. 1942.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of a Plain Aileron with Various Trailing-Edge Modifications on a Tapered Wing. II - Aileron with Thickened and Beveled Trailing Edges. ARR (WR L-228), Oct. 1942.
- Neely, Robert H.: Wind-Tunnel Tests of Two Tapered Wings with Straight Trailing Edges and with Constant-Chord Center Sections of Different Spans. ARR (WR L-332), March 1943.
- Fairbanks, Richard W. and Alexander, Sidney R.: Wind-Tunnel Tests of Two Tapered Wings with Straight Leading Edges and with Constant-Chord Center Sections of Different Spans. ARR 3J28 (WR L-311), Oct. 1943.
- Neely, Robert H.: Wind-Tunnel Tests of an NACA 44R-Series Tapered Wing with a Straight Trailing Edge and a Constant-Chord Center Section. RB 3L13, Dec. 1943.
- Savelyev, V. V.: Determination of the Mass Moments and Radii of Inertia of the Sections of a Tapered Wing and the Center-of-Gravity Line Along the Wing Span. TM 1052, Dec. 1943.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.
- Brown, Clinton E.: Theoretical Lift and Drag of Thin Triangular Wings at Supersonic Speeds. Rept. 839, 1946.
- Shortal, Joseph A. and Maggin, Bernard: Effect of Sweepback and Aspect Ratio on Longitudinal Stability Characteristics of Wings at Low Speeds. TN 1093, July 1946.
- Neely, Robert H.; Bollech, Thomas V.; Westrick, Gertrude C. and Graham, Robert R.: Experimental and Calculated Characteristics of Several NACA 44-Series Wings with Aspect Ratios of 8, 10, and 12 and Taper Ratios of 2.5 and 3.5. TN 1270, May 1947.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Letko, William and Feigenbaum, David: Wind-Tunnel Investigation of Split Trailing-Edge Lift and Trim Flaps on a Tapered Wing with 23° Sweepback. TN 1352, July 1947.

- Taper Complete Wings (Cont.)
- Purser, Paul E.; Spearman, M. Leory and Bates, William R .: Preliminary Investigation at Low Speed of Downwash Characteristics of Small-Scale Sweptback Wings. TN 1378, July 1947.
- Nielsen, Jack N.: Effect of Aspect Ratio and Taper on the Pressure Drag at Supersonic Speeds of Unswept Wings at Zero Lift. TN 1487, Nov. 1947.
- DeYoung, John: Theoretical Additional Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1491, Dec. 1947.
- Lovell, Powell M., Jr.: The Effect of Wing Bending Deflection on the Rolling Moment Due to Sideslip. TN 1541, Feb. 1948.
- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Sweptback Wings. TN 1543, March 1948.
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Brown, Clinton E. and Adams, Mac C.: Damping in Pitch and Roll of Triangular Wings at Supersonic Speeds. TN 1566, April 1948.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. (Partial Report: Triangular Wing). TM 1176, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Wollner, Bertram C .: Charts for Determining Preliminary Values of Span-Load, Shear, Bending-Moment, and Accumulated-Torque Distributions of Swept Wings of Various Taper Ratios. RM L8A26, July 1948.
- Letko, William and Cowan, John W.: Effect of Taper Ratio on Low-Speed Static and Yawing Stability Derivatives of 45° Sweptback Wings with Aspect Ratio of 2.61. TN 1671, July 1948.
- Margolis, Kenneth: Supersonic Wave Drag of Nonlifting Sweptback Tapered Wings with Mach Lines Behind the Line of Maximum Thickness. TN 1672, Aug. 1948.

- Bollech, Thomas V.: Experimental and Calculated Characteristics of Several High-Aspect-Ratio Tapered Wings Incorporating NACA 44-Series, 230-Series, and Low-Drag 64-Series Airfoil Sections. TN 1677, Sept. 1948.
- Margolis, Kenneth: Supersonic Wave Drag of Sweptback Tapered Wings at Zero Lift. TN 1448, Oct. 1948.
- Weil, Joseph and Sleeman, William C., Jr.: Prediction of the Effects of Propeller Operation on the Static Longitudinal Stability of Single-Engine Tractor Monoplanes with Flaps Retracted. TN 1722, Oct. 1948.
- Stevens, Victor I.: Theoretical Basic Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1772, Dec. 1948.
- Malvestuto, Frank S., Jr. and Margolis, Kenneth: Theoretical Stability Deriva-tives of Thin Sweptback Wings Tapered to a Point with Sweptback or Swept-forward Trailing Edges for a Limited Range of Supersonic Speeds. TN 1761, Jan. 1949.
- Bird, John D .: Some Theoretical Low-Speed Span Loading Characteristics of Swept Wings in Roll and Sideslip. TN 1839, March 1949.
- Polhamus, Edward C.: A Simple Method of Estimating the Subsonic Lift and Damping in Roll of Sweptback Wings. TN 1862, April 1949.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. TM 1225, May 1949.
- Malvestuto, Frank S., Jr.; Margolis, Kenneth and Ribner, Herbert S.: Theoretical Lift and Damping in Roll of Thin Sweptback wings of Arbitrary Taper and Sweep at Supersonic Speeds. Subsonic Leading Edges and Supersonic Trailing Edges. TN 1860, April 1949.
- Tucker, Warren A. and Nelson, Robert L.: The Effect of Torsional Flexibility on the Rolling Characteristics at Supersonic Speeds of Tapered Unswept Wings. TN 1890, June 1949.
- Goodman, Alex and Adair, Glenn H.: Estimation of the Damping in Roll of Wings Through the Normal Flight Range of Lift Coefficient. TN 1924, July 1949.
- Inlets and Exits (1.2.2.2.5)
- Jacobs, Eastman N.: Effect of Protruding Gasoline Tanks upon the Characteristics of an Airfoil. TN 249, Oct. 1926.

- Inlets and Exits Complete Wings (Cont.)
- Biermann, David and Valentine, E. Floyd: Preliminary Model Tests of a Wing-Duct Cooling System for Radial Engines. ACR, Feb. 1939.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing-Cooling Ducts. Effects of Propeller Slipstream. ACR, March 1939.
- Silverstein, Abe: Experiments on the Recovery of Waste Heat in Cooling Ducts. ACR, May 1939.
- Brevoort, M. J. and Leifer, M.: Radiator Design and Installation. ACR, May 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Blowers of Three Designs Operating in Conjunction with a Wing-Duct Cooling System for Radial Engines. ACR, June 1939.
- Biermann, David and McLellan, Charles H.: Wind-Tunnel Investigation of Rectangular Air-Duct Entrances in the Leading Edge of an NACA 23018 Wing. ACR, Sept. 1940.
- Biermann, David and Corsen, Blake W., Jr.: Model Tests of a Wing-Duct System for Auxiliary Air Supply. ACR, Jan. 1941.
- Nelson, W. J. and Czarnecki, K. R.: Wind-Tunnel Investigation of Wing Ducts on a Single-Engine Pursuit Airplane. ARR 3J13 (WR L-407), Oct. 1943.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Lange, Roy H.: A Summary of Drag Results from Recent Langley Full-Scale-Tunnel Tests of Army and Navy Airplanes. ACR L5A30 (WR L-108), Feb. 1945.
- Graham, Robert R.; Martina, Albert P. and Salmi, Reino J.: Effects of Wing Flaps and Wing Duct Inlet on the Lift and Stalling Characteristics of a 1/4-Scale Partial-Span Model of the Republic XF-12 Airplane in the Langley 19-Foot Pressure Tunnel. RM L6J22, Nov. 1946.
- Oswatitsch, Kl.: Pressure Recovery for Missiles with Reaction Propulsion at High Supersonic Speeds (The Efficiency of Shock Diffusers). TM 1140, June 1947.

- Mossman, Emmet A. and Gault, Donald E.:
 Development of NACA Submerged Inlets and a Comparison with Wing
 Leading Edge Inlets for a 1/4-Scale
 Model of a Fighter Airplane. RM
 A7A31, Aug. 1947.
- Surface Conditions (1.2.2.2.6)
- Kumbruch, H.: Similitude Tests on Wing Sections. TN 53, April 1921.
- Zahm, A. F.: Influence of Model Surface and Air Flow Texture on Resistance of Aerodynamic Bodies. Rept. 139, 1922.
- Schrenk, O.: Effect of Roughness on Properties of Airfoils. TM 375, Aug. 1926.
- Wood, Donald H.: Tests of Large Airfoils in the Propeller Research Tunnel, Including Two with Corrugated Surfaces. Rept. 336, 1929.
- Weick, Fred E.: Full Scale Investigation of the Drag of a Wing Radiator. TN 318, Sept. 1929.
- Schrenk, Martin: Measurement of Profile Drag on an Airplane in Flight by the Momentum Method. I. TM 557, March 1930.
- Jacobs, Eastman N.: The Aerodynamic Characteristics of Eight Very Thick Airfoils from Tests in the Variable Density Wind Tunnel. Rept. 391, 1931.
- Jacobs, Eastman N. and Sherman, Albert: Wing Characteristics as Affected by Protuberances of Short Span. Rept. 449, 1933.
- Hübner, Walter and Pleines, Wilhelm: The D.V.L. Gliding-Angle Control (W. Hübner Design). TM 697, Jan. 1933.
- Hooker, Ray W.: The Aerodynamic Characteristics of Airfoils as Affected by Surface Roughness. TN 457, April 1933.
- DeFrance, S. J.: Effect of the Surface Condition of a Wing on the Aerodynamic Characteristics of an Airplane. TN 495, April 1934.
- Dearborn, C. H.: Full-Scale Drag Tests of Landing Lamps. TN 497, May 1934.
- Hood, Manley J.: The Effects of Surface Waviness and of Rib Stitching on Wing Drag. TN 724, Aug. 1939.
- Rodert, Lewis A. and Jones, Alun R.: Profile-Drag Investigation of an Airplane Wing Equipped with Rubber Inflatable De-Icer. ACR, Dec. 1939.

- Surface Conditions Complete Wings (Cont.)
- Muse, Thomas C.: The Effect of Various Wing-Gun Installations on the Aerodynamic Characteristics of an Airplane Model Equipped with an NACA Low-Drag Wing. ACR, July 1941.
- Czarnecki, K. R. and Guryansky, Eugene R.: Tests of Wing Machine-Gun and Cannon Installations in the NACA Full-Scale Wind Tunnel. ACR, Aug. 1941.
- Jacobs, Eastman N.; Lundquist, Eugene E.; Davidson, Milton and Houbolt, John C.: A Preliminary Study of the Effect of Compressive Load on the Fairness of a Low-Drag Wing Specimen with Z-Section Stiffeners. CB (WR L-527), Jan. 1943.
- Katzoff, S. and Finn, Robert S.: Note on the Interpretation of Wake-Survey Data and Its Use in the Estimation of Induced Drag Due to Irregularities. MR (WR L-639), Jan. 1944.
- Zalovcik, John A.: Profile-Drag Coefficients of Conventional and Low-Drag Airfoils as Obtained in Flight. ACR L4E31 (WR L-139), May 1944.
- Zalovcik, John A. and Wood, Clotaire: A Flight Investigation of the Effect of Surface Roughness on Wing profile Drag with Transition Fixed. ARR L4I25 (WR L-159), Sept. 1944.
- Turner, Philip S.; Doran, Jewel and Reinhart, Frank W.: Fairing Compositions for Aircraft Surfaces. TN 958, Nov. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Nissen, James M.; Gadeberg, Burnett L. and Hamilton, William T.: Correlation of the Drag Characteristics of a P-51B Airplane Obtained from High-Speed Wind Tunnel and Flight Tests. ACR 4K02 (WR A-62), Feb. 1945.
- Zalovcik, John A. and Skoog, Richard B.:
 Flight Investigation of Boundary-Layer
 Transition and Profile Drag of an
 Experimental Low-Drag Wing Installed
 on a Fighter-Type Airplane. ACR
 L5C08a (WR L-94), April 1945.
- Zalovcik, John A.: Flight Investigation of Boundary-Layer and Profile-Drag Characteristics of Smooth Wing Sections of a P-47D Airplane. ACR L5H11a (WR L-86), Oct. 1945.

- Zalovcik, John A. and Daum, Fred L.: Flight Investigation at High Speeds of Profile Drag of Wing of a P-47D Airplane Having Production Surfaces Covered with Camouflage Paint. ACR L6B21 (WR L-98), March 1946.
- Quinn, John H., Jr.: Wind-Tunnel Investigation of Boundary-Layer Control by Suction on the NACA 653-418, a = 1.0 Airfoil Section with a 0.29-Airfoil-Chord Double Slotted Flap. TN 1071, June 1946.
- Hall, Charles F. and Fitzgerald, Fred F.: An Approximate Method for Calculating the Effect of Surface Roughness on the Drag of an Airplane. RM A7B24, March 1947.
- Schueller, Carl F.: Pressure-Distribution Measurements on a Full-Scale Horizontal Tail Surface for a Mach Number Range of 0.20 to 0.70. RM L7D08, June 1947.
- Tetervin, Neal: A Review of Boundary-Layer Literature. TN 1384, July 1947.
- Sivells, James C. and Spooner, Stanley H.:
 Investigation in the Langley 19-Foot
 Pressure Tunnel of Two Wings of NACA
 65-210 and 64-210 Airfoil Sections
 with Various Type Flaps. TN 1579,
 May 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. II Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 4.5. RM A8B11, June 1948.
- Davis, Don D., Jr. and Sweberg, Harold H.: Investigation of Some Factors Affecting Comparisons of Wind-Tunnel and Flight Measurements of Maximum Lift Coefficients for a Fighter-Type Airplane. TN 1639, June 1948.
- Bollech, Thomas V.: Experimental and Calculated Characteristics of Several High-Aspect-Ratio Tapered Wings Incorporating NACA 44-Series, 230-Series, and Low-Drag 64-Series Airfoil Sections. TN 1677, Sept. 1948.
- Cooper, Morton and Korycinski, Peter F.: The Effects of Compressibility on the Lift, Pressure, and Load Characteristics of a Tapered Wing of NACA 66-Series Airfoil Sections. TN 1697, Oct. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. III Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 6. RM A8H30, Dec. 1948.

- Surface Conditions Complete Wings (Cont.)
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.

HIGH LIFT DEVICES (1.2.2.3)

- Wolff, E. B. and Koning, C.: Tests for Determining the Effect of a Rotating Cylinder Fitted into the Leading Edge of an Airplane Wing. TM 354, March 1926.
- Serebrisky, Y. M. and Biachuev, S. A.: Wind-Tunnel Investigation of the Horizontal Motion of a Wing Near the Ground. TM 1095, Sept. 1946.
- Thiel, A. and Weissinger, J.: Pressure-Distribution Measurements on a Straight and on a 35° Swept-Back Tapered Wing. TM 1126, Jan. 1947.
- Fischel, Jack and Schneiter, Leslie E.: High-Speed Wind-Tunnel Investigation of High Lift and Aileron-Control Characteristics of an NACA 65-210 Semispan Wing. TN 1473, Nov. 1947.
- Fischel, Jack and Vogler, Raymond L.:
 High-Lift and Lateral Control Characteristics of an NACA 652-215 Semispan Wing Equipped with Plug and Retractable Ailerons and a Full-Span Slotted Flap. TN 1872, April 1949.

Flaps (1.2.2.3.1)

- Norton, F. H.: The Factors That Determine the Minimum Speed of an Airplane. TN 54, March 1921.
- Seiferth, R.: Experiments with Three Horizontal Empennages. TM 419, July 1927.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind Tunnel Force Tests in Wing Systems Through Large Angles of Attack. TN 294, Aug. 1928.
- Knight, Montgomery and Wenzinger, Carl J.: Wind Tunnel Tests on a Series of Wing Models Through a Large Angle of Attack Range. I - Force Tests. Rept. 317, 1929.
- Pinkerton, Robert M.: Analytical Determination of the Load on a Trailing Edge Flap. TN 353, Oct. 1930.
- Lachmann, G.: Practical Tests with the "Auto Control Slot." Part I: Lecture. TM 593, Nov. 1930.

- Lachmann, G.: Practical Tests with the "Auto Control Slot." Part II: Discussion. TM 594, Nov. 1930.
- Soulé, Hartley A.: The Effect of Slots and Flaps on the Lift and Drag of the McDonnell Airplane as Determined in Flight. TN 398, Nov. 1931.
- Weick, Fred E. and Wenzinger, Carl J.:
 The Characteristics of a Clark Y Wing
 Model Equipped with Several Forms of
 Low-Drag Fixed Slots. Rept. 407, 1932.
- Weick, Fred E. and Shortal, Joseph A.: The Effect of Multiple Fixed Slots and a Tailing-Edge Flap on the Lift and Drag of a Clark Y Airfoil. Rept. 427, 1932.
- Weick, Fred E. and Sanders, Robert: Wind-Tunnel Tests of a Hall High-Lift Wing. TN 417, May 1932.
- Weick, Fred E. and Platt, Robert C.: Wind-Tunnel Tests of the Fowler Variable-Area Wing. TN 419, May 1932.
- Weick, Fred E. and Harris, Thomas A.: The Aerodynamic Characteristics of a Model Wing Having a Split Flap Deflected Downward and Moved to the Rear. TN 422, May 1932.
- Weick, Fred E. and Platt, Robert C.: Wind-Tunnel Tests on Model Wing with Fowler Flap and Specially Developed Leading-Edge Slot. TN 459, May 1933.
- Weick, Fred E. and Sanders, Robert:
 Aerodynamic Tests of a Low Aspect
 Ratio Tapered Wing with Various
 Flaps, for Use on Tailless Airplanes.
 TN 463, June 1933.
- Gruschwitz, Eugen and Schrenk, Oskar: A Simple Method for Increasing the Lift of Airplane Wings by Means of Flaps. TM 714, June 1933.
- Wenzinger, Carl J.: The Effect of Partial-Span Split Flaps on the Aerodynamic Characteristics of a Clark Y Wing. TN 472, Sept. 1933.
- Wallace, Rudolf N.: The Effect of Split
 Trailing-Edge Wing Flaps on the Aerodynamic Characteristics of a Parasol
 Monoplane. TN 475, Nov. 1933.
- Soulé, Hartley A. and Wetmore, J. W.: The Effect of Slots and Flaps on Lateral Control of a Low-Wing Monoplane as Determined in Flight. TN 478, Nov. 1933.

- Flaps Complete Wings (Cont.)
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. XII Upper
 Surface Ailerons on Wings with Split
 Flaps. Rept. 499, 1934.
- Wenzinger, Carl J.: Wind-Tunnel Measurements of Air Loads on Split Flaps. TN 498, May 1934.
- Wenzinger, Carl J.: The Effects of Full-Span and Partial-Span Split Flaps on the Aerodynamic Characteristics of a Tapered Wing. TN 505, Sept. 1934.
- Soulé, H. A. and McAvoy, W. H.: Flight Investigation of Lateral Control Devices for Use with Full-Span Flaps. Rept. 517, 1935.
- Platt, Robert C.: Aerodynamic Characteristics of a Wing with Fowler Flaps Including Flap Loads, Downwash, and Calculated Effect on Take-Off. Rept. 534, 1935.
- Wallace, Rudolf: Investigation of Full-Scale Split Trailing-Edge Wing Flaps with Various Chords and Hinge Locations. Rept. 539, 1935.
- Noyes, Richard W.: Wind-Tunnel Tests of a Wing with a Trailing-Edge Auxiliary Airfoil Used as a Flap. TN 524, April 1935.
- Wenzinger, Carl J. and Harris, Thomas A.:
 Pressure Distribution over a Rectangular Airfoil with a Partial-Span
 Split Flap. Rept. 571, 1936.
- Weick, Fred E.: Wind-Tunnel Tests of Wing Flaps Suitable for Direct Control of Glide-Path Angle. TN 552, Jan. 1936.
- Wetmore, J. W.: Calculated Effect of Various Types of Flap on Take-Off over Obstacles. TN 568, May 1936.
- Pearson, H. A.: A Method of Estimating the Aerodynamic Effects of Ordinary and Split Flaps of Airfoils Similar to the Clark Y. TN 571, June 1936.
- Dearborn, C. H. and Soulé, H. A.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with a Fowler Flap. TN 578, Aug. 1936.
- Pearson, H. A.: Span Load Distribution for Tapered Wings with Partial-Span Flaps. Rept. 585, 1937.
- Parsons, John F. and Silverstein, Abe: Full-Scale Span Load Distribution on a Tapered Wing with Split Flaps of Various Spans. TN 591, Feb. 1937.

- Kiel, George: Pressure Distribution on a Wing Section with Slotted Flap in Free Flight Tests. TM 835, Aug. 1937.
- Jacobs, Eastman N.: Tapered Wings, Tip Stalling, and Preliminary Results from Tests of the Stall-Control Flap. ACR (WR L-296), Nov. 1937.
- Wenzinger, Carl J.: Pressure Distribution over a Clark Y-H Airfoil Section with a Split Flap. TN 627, Dec. 1937.
- Wenzinger, Carl J.: Wind-Tunnel Tests of a Clark Y Wing Having Split Flaps with Gaps. TN 650, May 1938.
- Wenzinger, Carl J. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Rectangular and Tapered NACA 23012 Wings with Plain Ailerons and Full-Span Split Flaps. TN 661, Aug. 1938.
- House, R. O.: The Effects of Partial-Span Plain Flaps on the Aerodynamic Characteristics of a Rectangular and a Tapered Clark Y Wing. TN 663, Sept. 1938.
- Silverstein, Abe and Katzoff, S.: Design Charts for Predicting Downwash Angles and Wake Characteristics Behind Plain and Flapped Wings. Rept. 648, 1939.
- Silverstein, Abe; Katzoff, S. and Bullivant, W. Kenneth: Downwash and Wake Behind Plain and Flapped Airfoils. Rept. 651, 1939.
- Pearson, Henry A. and Anderson, Raymond F.: Calculation of the Aerodynamic Characteristics of Tapered Wings with Partial-Span Flaps. Rept. 665, 1939.
- Troller, Th. and Rokus, F.: Pressure-Distribution Measurements on a Tapered Wing with a Full-Span Split Flap in Curved Flight. TN 683, Jan. 1939.
- Ruden, P.: Experiments on a Slotted Wing. TM 890, March 1939.
- Bamber, M. J. and House, R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. I - Four NACA 23012 Wings of Various Plan Forms With and Without Dihedral. TN 703, April 1939.
- Recant, Isidore G.: Wind-Tunnel Investigation of Ground Effect on Wings with Flaps. TN 705, May 1939.
- House, Rufus O.: The Effects of Partial-Span Slotted Flaps on the Aerodynamic Characteristics of a Rectangular and a Tapered NACA 23012 Wing. TN 719, July 1939.

- Flaps Complete Wings (Cont.)
- Rokus, Frank G.: Pressure-Distribution Measurements on a Rectangular Wing with a Partial-Span Split Flap in Curved Flight. TN 742, Dec. 1939.
- Donely, Philip and Shufflebarger, C. C.: Tests of a Gust-Alleviating Flap in the Gust Tunnel. TN 745, Jan. 1940.
- Harris, Thomas A. and Swanson, Robert S.: Wind-Tunnel Tests of an NACA 23012 Airfoil Equipped with a Slotted Extensible and a Plain Extensible Flap. TN 782, Nov. 1940.
- House, Rufus O. and Wallace, Arthur R.: Wind-Tunnel Investigation of Effect of Interference on Lateral-Stability Characteristics of Four NACA 23012 Wings, an Elliptical and a Circular Fuselage and Vertical Fins. Rept. 705, 1941.
- Wenzinger, Carl J. and Rogallo, Francis M.: Wind-Tunnel Investigation of Spoiler Deflector, and Slot Lateral-Control Devices on Wings with Full-Span Split and Slotted Flaps. Rept. 706, 1941.
- Bullivant, W. Kenneth: Tests of the NACA 0025 and 0035 Airfoils in the Full-Scale Wind Tunnel. Rept. 708, 1941.
- Ames, Milton B., Jr. and Sears, Richard I.: Determination of Control-Surface Characteristics from NACA Plain-Flap and Tab Data. Rept. 721, 1941.
- Greenberg, Harry: Characteristics of NACA 4400R Series Rectangular and Tapered Airfoils, Including the Effect of Split Flaps. ACR (WR L-493), Jan. 1941.
- Harris, Thomas A. and Purser, Paul E.:
 Wind-Tunnel Investigation of Plain
 Ailerons for a Wing with a Full-Span
 Flap Consisting of an Inboard Fowler
 and an Outboard Retractable Slit Flap.
 ACR (WR L-317), March 1941.
- Rogallo, Francis M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Plain and Slot-Lip Aileron on a Wing with a Full-Span Slotted Flap. ACR (WR L-375), April 1941.
- Lowry, John G.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with Several Arrangements of Slotted Flaps with Extended Lips. TN 808, May 1941.
- Rogallo, F. M. and Schuldenfrei, Marvin: Wind-Tunnel Investigation of a Plain and a Slot-Lip Aileron on a Wing with a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Slotted Flap. ARR (WR L-421), June 1941.

- Purser, Paul E. and Turner, Thomas R.:
 Wind-Tunnel Investigation of Perforated
 Split Flaps for Use as Dive Brakes on a
 Rectangular NACA 23012 Airfoil. ACR
 (WR L-445), July 1941.
- Muse, Thomas C. and Neely, Robert H.:
 Wind-Tunnel Investigation of an NACA
 66,2-216 Low-Drag Wing with Split
 Flaps of Various Sizes. ACR, Sept.
 1941.
- Hartwig, G.: Observations of the Effect of Wing Appendages and Flaps on the Spread of Separation of Flow over the Wing. TM 988, Sept. 1941.
- Gillis, Clarence L. and McKee, John W.: Wind-Tunnel Investigation of an NACA 23012 Airfoil with an 18.05-Percent-Chord Maxwell Slat and with Trailing-Edge Flaps. MR (WR L-574), Oct. 1941.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Development of a Plug-Type Spoiler-Slot Aileron for a Wing with a Full-Span Slotted Flap and a Discussion of Its Application. ARR (WR L-420), Nov. 1941.
- Muse, Thomas C. and Neely, Robert H.:
 Wind-Tunnel Investigation of an NACA
 Low-Drag Tapered Wing with Straight
 Trailing Edge and Simple Split Flaps.
 ACR, Dec. 1941.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Spoiler-Slot Aileron on an NACA 23012 Airfoil with a Full-Span Fowler Flap. ARR (WR L-376), Dec. 1941.
- Jones, Robert T.: Notes on the Stability and Control of Tailless Airplanes. TN 837, Dec. 1941.
- Jones, Robert T. and Cohen, Doris: Determination of Optimum Plan Forms for Control Surfaces. Rept. 731, 1942.
- Lowry, John G. and Toll, Thomas A.:

 Power-On Longitudinal-Stability and
 Control Tests of the 1/8-Scale Model
 of the Brewster F2A Airplane Equipped
 with Full-Span Slotted Flaps and a New
 Horizontal Tail. MR (WR L-709),
 March 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of a Plain Aileron and a Balanced Aileron on a Tapered Wing with Full-Span Duplex Flaps. ARR (WR L-481), July 1942.
- Lowry, John G. and Liddell, Robert B.:
 Wind-Tunnel Investigation of a Tapered
 Wing with a Plug-Type Spoiler-Slot
 Aileron and Full-Span Slotted Flaps.
 ARR (WR L-250), July 1942.

- Flaps Complete Wings (Cont.)
- Pass, H. R.: Wind-Tunnel Study of the Effects of Propeller Operation and Flap Deflection on the Pitching Moments and Elevator Hinge Moments of a Single-Engine Pursuit-Type Airplane. ARR (WR L-411), July 1942.
- Sweberg, Harold H.: The Effect of Propeller Operation on the Air Flow in the Region of the Tail Plane for a Twin-Engine Tractor Monoplane. ARR (WR L-381), Aug. 1942.
- Recant, I. G. and Wallace, A. R.: Effect of Ground on Characteristics of a Model of a Low-Wing Airplane with Full-Span Slotted Flap With and Without Power. ARR (WR L-335), Sept. 1942.
- Sivells, James C.: Tests in the 19-Foot Pressure Tunnel of a Rectangular NACA 0012 Horizontal Tail Plane with Plain and Horn-Balanced Elevators. ARR, Oct. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Purser, Paul E. and Toll, Thomas A.: Wind-Tunnel Investigation of the Characteristics of Blunt-Nose Ailerons on a Tapered Wing. ARR (WR L-262), Feb. 1943.
- Neely, Robert H.: Wind-Tunnel Tests of Two Tapered Wings with Straight Trailing Edges and with Constant-Chord Center Sections of Different Spans. ARR (WR L-332), March 1943.
- Rogallo, F. M.; Lowry, John G. and Fischel, Jack: Wind-Tunnel Investigation of a Full-Span Retractable Flap in Combination with Full-Span Plain and Internally Balanced Ailerons on a Tapered Wing. ARR 3H23 (WR L-506), Aug. 1943.
- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.: Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3I30 (WR W-6), Sept. 1943.
- Fairbanks, Richard W. and Alexander, Sidney R.: Wind-Tunnel Tests of Two Tapered Wings with Straight Leading Edges and with Constant-Chord Center Sections of Different Spans. ARR 3J28 (WR L-311), Oct. 1943.
- Neely, Robert H.: Wind-Tunnel Tests of an NACA 44R-Series Tapered Wing with a Straight Trailing Edge and a Constant-Chord Center Section. RB 3L13, Dec. 1943.

- Laitone, Edmund V.: An Investigation of the High-Speed Lateral-Control Characteristics of a Spoiler. ACR 4C23, March 1944.
- Ankenbruck, Herman O.: Maximum Lift Coefficients of Airplanes Based on Sum of Wing and Tail Areas. RB L4C31 (WR L556), March 1944.
- Ashworth, C. Dixon; Spooner, Stanley H. and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. I Full-Span Flap and Air-Brake Investigation. MR (WR L-563), Sept. 1944.
- Spooner, Stanley H.; Ashworth, C. Dixon and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. II Roll-Flap Positioning and Lateral-Control Investigation. MR (WR L-564), Sept. 1944.
- Spahr, J. Richard and Christophersen, Don R.: Measurements in Flight of the Lateral-Control Characteristics of a Navy OS2U-2 Airplane (No. 3075) Equipped with Full-Span Zap Flaps and Simple Circular-Arc-Type Ailerons. MR (WR A-32), Sept. 1944.
- Pitkin, Marvin and Maggin, Bernard: Analysis of Factors Affecting Net Lift Increment Attainable with Trailing-Edge Split Flaps on Tailless Airplanes. ARR L4I18 (WR L-164), Sept. 1944.
- Laitone, Edmund V.: An Investigation of 0.15-Chord Ailerons on a Low-Drag Tapered Wing at High Speeds. ACR 4125 (WR A-24), Sept. 1944.
- Garner, I. Elizabeth: Wind-Tunnel Investigation of Control-Surface Characteristics. XX Plain and Balanced Flaps on an NACA 0009 Rectangular Semispan Tail Surface. ARR L4I11f (WR L-186), Oct. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Sandahl, Carl A.: Wind-Tunnel Investigation of Effects of a Pusher Propeller on Lift, Profile Drag, Pressure Distribution, and Boundary-Layer Transition of a Flapped Wing. ACR L5C08 (WR L-148), April 1945.

- Flaps Complete Wings (Cont.)
- Laitone, Edmund V. and Summers, James L.: An Additional Investigation of the High-Speed Lateral-Control Characteristics of Spoilers. ACR 5D28 (WR A-21), June 1945.
- Daum, Fred L. and Sawyer, Richard H.:
 Tests at Transonic Speeds of the Effectiveness of a Swept-Back Trailing-Edge Flap on an Airfoil Having Parallel Flat Surfaces, Extreme Sweepback, and Low Aspect Ratio. CB L5H01, Sept. 1945.
- Hanson, Frederick H., Jr.: The Effect of a Wing-Tip-Mounted Fuel Tank on the Aerodynamic Characteristics of a High-Speed Bomber Wing. ACR A5H06, Oct. 1945.
- Neely, Robert H. and Foster, Gerald V.: Wind-Tunnel Investigation of an NACA 66-Series 16-Percent-Thick Low-Drag Tapered Wing with Fowler and Split Flaps. ACR L5F28 (WR L-134), Jan. 1946.
- Freeman, Hugh B.: Boundary-Layer-Control Tests of Two Wings in the Langley Propeller-Research Tunnel. TN 1007, Jan. 1946.
- Letko, William and Goodman, Alex: Preliminary Wind-Tunnel Investigation at Low Speed of Stability and Control Characteristics of Swept-Back Wings. TN 1046, April 1946.
- Tucker, Warren A.: Wind-Tunnel Investigation of Effect of Wing Location,
 Power, and Flap Deflection on Effective Dihedral of a Typical Single-Engine Fighter-Airplane Model with Tail Removed. TN 1061, May 1946.
- Crandall, Stewart M.: Lifting-Surface-Theory Results for Thin Elliptic Wings of Aspect Ratio 3 with Chordwise Loadings Corresponding to 0.5-Chord Plain Flap and to Parabolic-Arc Camber. TN 1064, May 1946.
- Cotter, William E., Jr.: Summary and Analysis of Data on Damping in Yaw and Pitch for a Number of Airplane Models. TN 1080, May 1946.
- Lowry, John G. and Turner, Thomas R.:
 Pressure Distribution over a PlugType Spoiler-Slot Aileron on a Tapered Wing with Full-Span Slotted
 Flaps. TN 1079, June 1946.
- Sawyer, Richard H.: Flight Measurements of the Lateral Control Characteristics of Narrow-Chord Ailerons on the Trailing Edge of a Full-Span Slotted Flap. TN 1188, Feb. 1947.

- Lemme, H. G.: Force and Pressure-Distribution Measurements on a Rectangular Wing with a Slotted Droop Nose and with Either Plain and Split Flaps in Combination or a Slotted Flap. TM 1108, March 1947.
- Lemme, H. A.: Force and Pressure-Distribution Measurements on a Rectangular Wing with Double-Hinged Nose. TM 1117, March 1947.
- Krueger, W.: Systematic Wind-Tunnel Measurements on a Laminar Wing with Nose Flap. TM 1119, April 1947.
- Wallace, Arthur R.; Rossi, Peter F. and Wells, Evalyn G.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Longitudinal Stability Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1239, April 1947.
- Hoggard, H. Page, Jr. and McKinney, Elizabeth G.: Wind-Tunnel Investigation of Control-Surface Characteristics of Plain and Balanced Flaps with Several Trailing-Edge Angles on an NACA 0009 Tapered Semispan Wing. TN 1248, April 1947.
- Lowry, John G. and Schneiter, Leslie E.: Investigation at Low Speed of the Longitudinal Stability Characteristics of a 60° Swept-Back Tapered Low-Drag Wing. TN 1284, May 1947.
- Bates, William R.: Collection and Analysis of Wind-Tunnel Data on the Characteristics of Isolated Tail Surfaces With and Without End Plates. TN 1291, May 1947.
- Furlong, G. Chester and Fitzpatrick, James E.: Effects of Mach Number and Reynolds Number on the Maximum Lift Coefficient of a Wing of NACA 230-Series Airfoil Sections. TN 1299, May 1947.
- Thiel, G. and Weissinger, F.: Six-Component Measurements on a Straight and a 35° Swept-Back Trapezoidal Wing With and Without Split Flap. TM 1107, June 1947.
- Schueller, Carl F.: Pressure-Distribution Measurements on a Full-Scale Horizontal Tail Surface for a Mach Number Range of 0.20 to 0.70. RM L7D08, June 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Longitudinal Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1339, July 1947.

- Flaps Complete Wings (Cont.)
- Purser, Paul E.; Spearman, M. Leroy and Bates, William R.: Preliminary Investigation at Low Speed of Downwash Characteristics of Small-Scale Sweptback Wings. TN 1378, July 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1379. July 1947.
- Barnes, Robert H.: High-Speed Load
 Distribution on the Wing of a 3/16-Scale
 Model of a Scout-Bomber Airplane with
 Flaps Deflected. RM A7D23, Aug. 1947.
- Deters, Owen J. and Russell, Robert T.: Investigation of a Spoiler-Type Lateral Control System on a Wing with Full-Span Flaps in the Langley 19-Foot Pressure Tunnel. TN 1409, Aug. 1947.
- Kruger, W.: Wind-Tunnel Investigation on a Changed Mustang Profile with Nose Flap Force and Pressure Distribution Measurements. TM 1177, Sept. 1947.
- Fischel, Jack and Schneiter, Leslie E.: High-Speed Wind-Tunnel Investigation of High Lift and Aileron-Control Characteristics of an NACA 65-210 Semispan Wing. TN 1473, Nov. 1947.
- Sivells, James C. and Spooner, Stanley H.:
 Investigation in the Langley 19-Foot
 Pressure Tunnel of Two Wings of
 NACA 65-210 and 64-210 Airfoil Sections with Various Type Flaps. TN
 1579, May 1948.
- Hopkins, Edward J.: An Exploratory Investigation of the Relative Merits of Split and Chord-Extension Flaps on a 45° Swept-Back Wing. RM A8A16, May 1948.
- Davis, Don D., Jr. and Sweberg, Harold H.:
 Investigation of Some Factors Affecting Comparisons of Wind-Tunnel and
 Flight Measurements of Maximum Lift
 Coefficients for a Fighter-Type
 Airplane. TN 1639, June 1948.
- Gale, Lawrence J.: Effect of Landing Flaps and Landing Gear on the Spin and Recovery Characteristics of Airplanes. TN 1643, June 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. II Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 4.5. RM A8B11, June 1948.

- Bollech, Thomas V.: Experimental and Calculated Characteristics of Several High-Aspect-Ratio Tapered Wings Incorporating NACA 44-Series, 230-Series, and Low-Drag 64-Series Airfoil Sections. TN 1677, Sept. 1948.
- Schneiter, Leslie E. and Naeseth, Rodger L.: Wind-Tunnel Investigation at Low Speed of the Lateral Control Characteristics of Ailerons Having Three Spans and Three Trailing-Edge Angles on a Semispan Wing Model. TN 1738, Nov. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. III - Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 6. RM A8H30, Dec. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7 Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- West, F. E., Jr. and Hallissy, J. M., Jr.:
 Effects of Compressibility on Normal-Force, Pressure, and Load Character-istics of a Tapered Wing of NACA 66-Series Airfoil Sections with Split Flaps. TN 1759, Dec. 1948.
- Fischel, Jack and Vogler, Raymond D.:
 High-Lift and Lateral Control Characteristics of an NACA 652-215 Semispan Wing Equipped with Plug and Retractable Ailerons and a Full-Span Slotted Flap. TN 1872, April 1949.
- Fischel, Jack and Watson, James M.: Investigation of Spoiler Ailerons for Use as Speed Brakes or Glide-Path Controls on Two NACA 65-Series Wings Equipped with Full-Span Slotted Flaps. TN 1933, Aug. 1949.

Slots and Slats (1.2.2.3.2)

- Lachmann, G.: Experiments with Slotted Wings. Part I - Slotted Wing Sections. Wieselsbenger, C.: Part II - Gottingen Tests of Handley-Page Wings. Katzmayer, C. and Kirste, L.: Part III - Experiments with Slotted Wings. TN 71, Nov. 1921.
- Kelemperer, W.: Problem of the Slotted Wing. TM 104, June 1922.

- Slots and Slats Complete Wings (Cont.)
- Lachmann, G.: Results of Experiments with Slotted Wings. TM 282, Oct. 1924.
- Lachmann, G.: Results of Recent Experiments with Slotted Wings. TM 298, Jan. 1925.
- Page, F. Handley: Tests on an Airfoil with Two Slots Suitable for an Aircraft of High Performance, Lift, Drag, Rolling and Yawing Moment Measurements. TM 369, July 1926.
- Seiferth, R.: Investigation of a Wing with an Auxiliary Upper Part. TM 418, June 1927.
- Betz, A.: Experiments of Airfoils with Aileron and Slot. TM 437, Nov. 1927.
- Purvez, Paul: Results of Aerodynamic Tests on Slotted Airfoils in the Aerotechnical Laboratory (S.T.Ae.) of Rhode St. Genese, Brussels. TM 449, Feb. 1928.
- Jacobs, Eastman N.: Pressure Distribution on a Slotted R.A.F. 31 Airfoil in the Variable Density Wind Tunnel. TN 308, June 1929.
- Katzmayr, Richard: Wings with Nozzle -Shaped Slots. TM 521, July 1929.
- Schrenk, Oskar: A Possible Method for Preventing the Autorotation of Airplane Wings. TM 569, June 1930.
- Lachmann, G.: Practical Tests with the "Auto Control Slot." Fart I: Lecture. TM 593, Nov. 1930.
- Lachmann, G.: Practical Tests with the "Auto Control Slot." Part II: Discussion. TM 594, Nov. 1930.
- Wenzinger, Carl J. and Shortal, Joseph A.: The Aerodynamic Characteristics of a Slotted Clark Y Wing as Affected by the Auxiliary Airfoil Position. Rept. 400, 1931.
- Haus, Fr.: The Use of Slots for Increasing the Lift of Airplane Wings. TM 635, Aug. 1931.
- Soulé, Hartley A.: The Effect of Slots and Flaps on the Lift and Drag of the McDonnell Airplane as Determined in Flight. TN 398, Nov. 1931.
- Schmidt, Wilhelm: Development of a Non-Autorotative Airplane Capable of Steep Landing. TM 650, Dec. 1931.
- Weick, Fred E. and Wenzinger, Carl J.: The Characteristics of a Clark Y Wing Model Equipped with Several Forms of Low-Drag Fixed Slots. Rept. 407, 1932.

- Weick, Fred E. and Shortal, Joseph A.: The Effect of Multiple Fixed Slots and a Trailing-Edge Flap on the Lift and Drag of a Clark Y Airfoil. Rept. 427, 1932.
- Weick, Fred E. and Bamber, Millard J.: Wind-Tunnel Tests of a Clark Y Wing with a Narrow Auxiliary Airfoil in Different Positions. Rept. 428, 1932.
- Weick, Fred E. and Wenzinger, Carl J.:
 Preliminary Investigation of Rolling
 Moments Obtained with Spoilers on
 Both Slotted and Plain Wings. TN 415,
 April 1932.
- Weick, Fred E. and Wenzinger, Carl J.: Effect of Length of Handley Page Tip Slots on the Lateral-Stability Factor, Damping in Roll. TN 423, July 1932.
- Soulé, Hartley A.: Flight Tests to Determine the Effect of a Fixed Auxiliary Airfoil on the Lift and Drag of a Parasol Monoplane. TN 440, Dec. 1932.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly at High Angles of Attack. VII.
 Handley Page Tip and Full-Span Slots with Ailerons and Spoilers. TN 443,
 Jan. 1933.
- Weick, Fred E. and Platt, Robert C.: Wind-Tunnel Tests on Model Wing with Fowler Flap and Specially Developed Leading-Edge Slot. TN 459, May 1933.
- Sanders, Robert: Aerodynamic Tests of a Low Aspect Ratio Tapered Wing with an Auxiliary Airfoil for Use on Tailless Airplanes. TN 477, Nov. 1933.
- Soulé, Hartley A. and Wetmore, J. W.: The Effect of Slots and Flaps on Lateral Control of a Low-Wing Monoplane as Determined in Flight. TN 478, Nov. 1933.
- Sherman, Albert and Harris, Thomas A.: The Effects of Equal-Pressure Fixed Slots on the Characteristics of a Clark Y Airfoil. TN 507, Oct. 1934.
- Zimmerman, C. H.: Aerodynamic Characteristics of Several Airfoils of Low Aspect Ratio. TN 539, Aug. 1935.
- Soulé, H. A. and Anderson, R. F.: Design Charts Relating to the Stalling of Tapered Wings. Rept. 703, 1940.
- Gillis, Clarence L. and McKee, John W.:
 Wind-Tunnel Investigation of an NACA
 23012 Airfoil with an 18.05-PercentChord Maxwell Slat and with TrailingEdge Flaps. MR (WR L-574), Oct.
 1941.

- Turner, William N. and Adams, Betty:
 Flight Measurements of the Effects of
 a Wing Leading-Edge Slot and Other
 Modifications on the Stability, Maximum Lift, and High Speed of an Observation Airplane. CMR (WR A-88),
 Jan. 1943.
- Laitone, Edmund V.: An Investigation of 0.15-Chord Ailerons on a Low-Drag Tapered Wing at High Speeds. ACR 4I25 (WR A-24), Sept. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Lemme, H. G.: Force and Pressure-Distribution Measurements on a Rectangular Wing with a Slotted Droop Nose and with Either Plain and Split Flaps in Combination or a Slotted Flap. TM 1108, March 1947.
- Lemme, H. A.: Force and Pressure-Distribution Measurements on a Rectangular Wing with Double-Hinged Nose. TM 1117, March 1947.
- Lowry, John G. and Schneiter, Leslie E.: Investigation at Low Speed of the Longitudinal Stability Characteristics of a 60° Swept-Back Tapered Low-Drag Wing. TN 1284, May 1947.
- Purser, Paul E.; Spearman, M. Leroy and Bates, William R.: Preliminary Investigation at Low Speed of Downwash Characteristics of Small-Scale Sweptback Wings. TN 1378, July 1947.
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a
 35° Sweptback Wing with 40-PercentSpan Slots and a Comparison with
 Wind-Tunnel Data. TN 1511,
 Jan. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Longitudinal Stability, Stalling, and Lift Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1679, Aug. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Stability, Control,
 and Stalling Characteristics of an Airplane Having a 35° Sweptback Wing
 Without Slots and with 80-Percent-Span
 Slots and a Comparison with WindTunnel Data. TN 1743, Nov. 1948.

Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.

CONTROLS (1.2.2.4)

- Knight, Montgomery and Bamber, Millard J.: Wind Tunnel Tests on a Model of a Monoplane Wing with Floating Ailerons. TN 316, Sept. 1929.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. VII-Handley
 Page Tip and Full-Span Slots with
 Ailerons and Spoilers. TN 443, Jan.
 1933.
- Weick, Fred E. and Noyes, Richard W.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. X-Various
 Control Devices on a Wing with a
 Fixed Auxiliary Airfoil. TN 451,
 March 1933.
- Weick, Fred E. and Harris, Thomas A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. XI-Various
 Floating Tip Ailerons on Both Rectangular and Tapered Wings. TN 458,
 May 1933.
- Bamber, Millard J.: Aerodynamic Rolling and Yawing Moments Produced by Floating Wing-Tip Ailerons, as Measured by the Spinning Balance. TN 493, March 1934.
- Weick, Fred E. and Noyes, Richard W.:
 Wind-Tunnel Research Comparing Lateral Control Devices Particularly at
 High Angles of Attack. XIII Auxiliary
 Airfoils Used as External Ailerons.
 Rept. 510, 1935.
- Soulé, H. A. and McAvoy, W. H.: Flight Investigation of Lateral Control Devices for Use with Full-Span Flaps. Rept. 517, 1935.
- Weick, Fred E. and Shortal, Joseph A.: Development of the NACA Slot-Lip Aileron. TN 547, Nov. 1935.
- Shortal, Joseph A.: Wind-Tunnel and Flight Tests of Slot-Lip Ailerons. Rept. 602, 1937.
- Wenzinger, Carl J. and Rogallo, Francis M.: Wind-Tunnel Investigation of Spoiler Deflector, and Slot Lateral-Control Devices on Wings with Full-Span Split and Slotted Flaps. Rept. 706, 1941.

- Controls Complete Wings (Cont.)
- Erickson, Albert L.: Investigation of Diving Moments of a Pursuit Airplane in the Ames 16-Foot High-Speed Wind Tunnel. CMR (WR A-65), Oct. 1942.
- Erickson, Albert L. and Nelson, Warren H.: High-Speed Wind-Tunnel Tests of Semispan Horizontal Tails for a Bomber Airplane. MR A4L18 (WR A-83), Dec. 1944.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.

Flap Type (1.2.2.4.1)

- Hoot, H. I.: The Effect of Airfoil Thickness and Plan Form on Lateral Control. Rept. 169, 1923.
- Lachmann, G.: Results of Experiments with Slotted Wings. TM 282, Oct. 1924.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Smith, R. H.: Lift, Drag, and Elevator Hinge Moments of Handley-Page Control Surfaces. Rept. 278, 1927.
- Dronin, Paul V.; Ramsden, Earl I. and Higgins, George J.: The Effect of Tip Shields on a Horizontal Tail Surface. TN 295, Aug. 1928.
- Heald, R. H. and Strother, D. H.: Effect of Variation of Chord and Span of Ailerons on Rolling and Yawing Moments in Level Flight. Rept. 298, 1929.
- Rhode, Richard V.: The Pressure Distribution over the Wings and Tail Surfaces of a PW-9 Pursuit Airplane in Flight. Rept. 364, 1930.
- Monish, B. H.: Effect of Variation of Chord and Span of Ailerons on Hinge Moments at Several Angles of Pitch. Rept. 370, 1930.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at
 High Angles of Attack. I Ordinary
 Ailerons on Rectangular Wings. Rept.
 419, 1932.
- Weick, Fred E. and Noyes, Richard W.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. II Slotted
 Ailerons and Frise Ailerons. Rept.
 422, 1932.

- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. III Ordinary Ailerons Rigged Up10° When
 Neutral. Rept. 423, 1932.
- Weick, Fred E. and Harris, Thomas A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices Particularly
 at High Angles of Attack. VI Skewed
 Ailerons on Rectangular Wings. Rept.
 444, 1932.
- Weick, Fred E. and Shortal, Joseph A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly at High Angles of Attack. VIII Straight and Skewed Ailerons on
 Wings with Rounded Tips. TN 445,
 Feb. 1933.
- Heald, R. H.: Effect of Aileron Displacement on Wing Characteristics. TN 448, Feb. 1933.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at
 High Angles of Attack. IX Tapered
 Wings with Ordinary Ailerons. TN
 449, Feb. 1933.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at
 High Angles of Attack. XII Upper
 Surface Ailerons on Wings with Split
 Flaps. Rept. 499, 1934.
- Weick, Fred E. and Jones, Robert T.: Résumé and Analysis of NACA Lateral Control Research. Rept. 605, 1937.
- Soulé, H. A. and Gracey, W.: A Flight Comparison of Conventional Ailerons on a Rectangular Wing and of Conventional and Floating Wing-Tip Ailerons on a Tapered Wing. Rept. 630, 1938.
- Soulé, H. A. and Gracey, W.: Improvement of Aileron Effectiveness by the Prevention of Air Leakage Through the Hinge Gap as Determined in Flight. TN 632, Jan. 1938.
- Wenzinger, Carl J.: Wind-Tunnel Tests of a Clark Y Wing Having Split Flaps with Gaps. TN 650, May 1938.
- Wenzinger, Carl J. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Rectangular and Tapered NACA 23012 Wings with Plain Ailerons and Full-Span Split Flaps. TN 661, Aug. 1938.
- Goett, Harry J. and Reeder, J. P.: Effects of Elevator Nose Shape, Gap, Balance, and Tabs on the Aerodynamic Characteristics of a Horizontal Tail Surface. Rept. 675, 1939.

- Flap Type Controls Complete Wings (Cont.)
- Silverstein, Abe and Katzoff, S.: Aerodynamic Characteristics of Horizontal Tail Surfaces. Rept. 688, 1940.
- Katzoff, S.: Longitudinal Stability and Control with Special Reference to Slipstream Effects. Rept. 690, 1940.
- Ames, Milton B., Jr. and Sears, Richard I.:
 Determination of Control-Surface
 Characteristics from NACA Plain-Flap
 and Tab Data. Rept. 721, 1941.
- Harris, Thomas A. and Purser, Paul E.: Wind-Tunnel Investigation of Plain Ailerons for a Wing with a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Retractable Slit Flap. ACR (WR L-317), March 1941.
- Rogallo, Francis M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Plain and Slot-Lip Aileron on a Wing with a Full-Span Slotted Flap. ACR (WR L-375), April 1941.
- Rogallo, F. M. and Schuldenfrei, Marvin: Wind-Tunnel Investigation of a Plain and a Slot-Lip Aileron on a Wing with a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Slotted Flap. ARR (WR L-421), June 1941.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Development of a Plug-Type Spoiler-Slot Aileron for a Wing with a Full-Span Slotted Flap and a Discussion of Its Application. ARR, Nov. 1941.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of 20-Percent-Chord Plain and Frise Ailerons on an NACA 23012 Airfoil. ARR (WR L-374), Dec. 1941.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Spoiler-Slot Aileron on an NACA 23012 Airfoil with a Full-Span Fowler Flap. ARR, Dec. 1941.
- Jones, Robert T. and Cohen, Doris: Determination of Optimum Plan Forms for Control Surfaces. Rept. 731, 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of a Plain Aileron and a Balanced Aileron on a Tapered Wing with Full-Span Duplex Flaps. ARR (WR L-481), July 1942.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of a Plain Aileron with Various Trailing-Edge Modifications on a Tapered Wing. ARR (WR L-513), Sept. 1942.

Rept. 678, 1639.

- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Development of Ailerons for the Curtiss XP-60 Airplane. ACR, Sept. 1942.
- Clousing, Lawrence A. and McAvoy,
 William H.: Flight Measurements of
 the Lateral Control Characteristics of
 a Vought-Sikorsky OS2U-2 Airplane
 (Navy No. 2189). MR (WR A-68), Sept.
 1942.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of a Plain Aileron with Various Trailing-Edge Modifications on a Tapered Wing. II - Ailerons with Thickened and Beveled Trailing Edges. ARR (WR L-228), Oct. 1942.
- Purser, Paul E. and McKee, John W.:
 Wind-Tunnel Investigation of a Plain
 Aileron with Thickened and Beveled
 Trailing Edges on a Tapered Low-Drag
 Wing. ACR (WR L-526), Jan. 1943.
- Laitone, Edmund V.: Investigation of the Longitudinal Stability at High Speeds of a 1/5-Scale Model of a Tailless Pursuit Airplane. MR (WR A-77), March 1943.
- Rogallo, F. M. and Lowry, John G.: Résumé of Data for Internally Balanced Ailerons. RB, March 1943.
- Rogallo, F. M. and Crandall, Stewart M.:
 Wind-Tunnel Investigation of Trimming
 Tabs on a Thickened and Beveled
 Aileron on a Tapered Low-Drag Wing.
 ACR (WR L-435), March 1943.
- Erickson, Albert L.: Wind-Tunnel Investigation of Devices for Improving the Diving Characterístics of Airplanes. MR 3F12 (WR A-66), April 1943.
- Rhode, Richard V. and Pearson, H. A.:
 Observations of Compressibility Phenomena in Flight. ACR 3D15 (WR L-417), April 1943.
- Dingeldein, Richard C.: Full-Scale Tunnel Investigation of the Pressure Distribution over the Tail of the P-47B Airplane. ARR 3E25 (WR L-439), May 1943.
- Purser, Paul E. and Gillis, Clarence L.:
 Preliminary Correlation of the Effects
 of Beveled Trailing Edges on the
 Hinged-Moment Characteristics of Control Surfaces. CB 3E14, May 1943.
- Lowry, John G.: Resume of Hinge-Moment Data for Unshielded Horn-Balanced Control Surfaces. RB 3F19 (WR L-169), June 1943.

Atternas and Priso Atterona.

- Flap Type Controls Complete Wings (Cont.)
- Rogallo, F. M.; Lowry, John G. and Fischel, Jack: Wind-Tunnel Investigation of a Full-Span Retractable Flap in Combination with Full-Span Plain and Internally Balanced Ailerons on a Tapered Wing. ARR 3H23 (WR L-506), Aug. 1943.
- Spahr, J. Richard and Christopherson, Don R.: Measurements in Flight of the Stability, Lateral-Control, and Stalling Characteristics of an Airplane Equipped with Full-Span Zap Flaps and Spoiler-Type Ailerons. RMR (WR A-28), Dec. 1943.
- Laitone, Edmund V.: An Investigation of the High-Speed Lateral-Control Characteristics of a Spoiler. ACR 4C23, March 1944.
- Spooner, Stanley H.; Ashworth, C. Dixion and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. II - Roll-Flap Positioning and Lateral-Control Investigation. MR (WR L-564), Sept. 1944.
- Hall, Charles F. and Mannes, Robert L .: Longitudinal Characteristics and Aileron Effectiveness of the XB-42 Airplane from High-Speed Wind-Tunnel Tests. CMR (WR A-84), Sept. 1944.
- Laitone, Edmund V.: An Investigation of 0.15-Chord Ailerons on a Low-Drag Tapered Wing at High Speeds. ACR 4I25 (WR A-24), Sept. 1944.
- Garner, I. Elizabeth: Wind-Tunnel Investigation of Control-Surface Characteristics. XX - Plain and Balanced Flaps on an NACA 0009 Rectangular Semispan Tail Surface. ARR L4I11f (WR L-186), Oct. 1944.
- Liddell, Robert B. and Lockwood, Vernard E.: Wind-Tunnel Investigation of Rounded Horns and of Guards on a Horizontal Tail Surface. ARR L4J16 (WR L-60), Oct. 1944.
- Becker, John V. and Korycinski, Peter F .: Aerodynamic Tests of a Full-Scale TBF-1 Aileron Installation in the Langley 16-Foot High-Speed Tunnel. ARR L4K22 (WR L-31), Dec. 1944.
- Alexander, S. R. and Sivells, James C .: Tests of a 1/14-Scale Powered Model of the XB-36 Airplane in the Langley 19-Foot Pressure Tunnel. I - Stalling Characteristics and Aileron Effectiveness of Several Wing and Flap Arrangements. MR L5B23 (WR L-624), Feb. 1945.

- Neihouse, Anshal I. and Kemp, W. B.: Effect of Fabric Deflection on Rudder Hinge-Moment Characteristics as Determined by Wind-Tunnel Tests. ARR L5A24, April 1945.
- Toll, Thomas A. and Ivey, Margaret F .: Wind-Tunnel Investigation of a Rectangular NACA 2212 Airfoil with Semispan Ailerons and with Nonperforated, Balanced Double Split Flaps for Use as Aerodynamic Brakes. ARR L5B17 (WR L-56), April 1945.
- Crane, Robert M.: Computation of Hinge-Moment Characteristics of Horizontal Tails From Section Data. CB 5B05 (WR A-11), April 1945.
- Beeler, De E. and Williams, Walter C .: Flight Tests of Dive-Recovery Flaps on an XP-51 Airplane. ACR L5D20a (WR L-778), May 1945.
- Schueler, Carl F. and Korycinski, Peter F.: Effect of Fabric Deflection at High Speeds on the Aerodynamic Characteristics of the Horizontal Tail Surface of an SB2D-1 Airplane. ARR L5F01a (WR L-170), June 1945.
- Laitone, Edmund V. and Summers, James L.: An Additional Investigation of the High Speed Lateral-Control Characteristics of Spoilers. ACR 5D28 (WR A-21), June 1945.
- Skoog, Richard B.: A Comparison of Two Flight-Test Procedures for the Determination of Aileron Control Capabilities of an Airplane. ARR 5E22 (WR A-37), July 1945.
- Daum, Fred L. and Sawyer, Richard H .: Tests at Transonic Speeds of the Effectiveness of a Swept-Back Trailing-Edge Flap on an Airfoil Having Parallel Flat Surfaces, Extreme Sweepback, and Low Aspect Ratio. CB L5H01, Sept. 1945.
- Tamburello, Vito; Smith, Bernard J. and Silvers, H. Norman: Wind-Tunnel Investigation of Control-Surface Characteristics of Plain and Balanced Flaps on an NACA 0009 Elliptical Semispan Wing. ARR L5L18 (WR L-41), Feb. 1946.
- Pearson, Henry A. and Aiken, William S. Jr.: Analysis of Effect of Rolling Pull-Outs on Wing and Aileron Loads of a Fighter Airplane. ARR L5104 (WR L-270), March 1946.
- Spreiter, John R. and Galster, George M.: Observations of Aileron Flutter on the Bell P-63A-6 Airplane in Flight at High Mach Numbers. ACR 6B08, April 1946.

- Flap Type Controls Complete Wings (Cont.)
- Letko, William and Goodman, Alex: Preliminary Wind-Tunnel Investigation at Low Speed of Stability and Control Characteristics of Swept-Back Wings. TN 1046, April 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Goranson, R. Fabian: Flight Tests of Experimental Beveled-Trailing-Edge Frise Ailerons on a Fighter Airplane. TN 1085, July 1946.
- Swanson, Robert S. and Crandall, Stewart M.: Lifting-Surface-Theory Aspect-Ratio Corrections to the Lift and Hinge-Moment Parameters for Full-Span Elevators on Horizontal Tail Surfaces. TN 1175, Feb. 1947.
- Sawyer, Richard H.: Flight Measurements of the Lateral Control Characteristics of Narrow-Chord Ailerons on the Trailing Edge of a Full-Span Slotted Flap. TN 1188, Feb. 1947.
- Toll, Thomas A.: Summary of Lateral-Control Research. TN 1245, March 1947.
- Purser, Paul E. and Cook, Charles B.: Collection and Analysis of Hinge-Moment Data on Control-Surface Tabs. TN 1113, April 1947.
- Swanson, Robert S.; Crandall, Stewart M. and Miller, Sadie: A Lifting-Surface-Theory Solution and Tests of an Elliptic Tail Surface of Aspect Ratio 3 with a 0.5-Chord 0.85-Span Elevator. TN 1275, May 1947.
- MacLachlan, Robert and Letko, William: Correlation of Two Experimental Methods of Determining the Rolling Characteristics of Unswept Wings. TN 1309, May 1947.
- Murray, Harry E. and Wells, Evalyn G.: Wind-Tunnel Investigation of the Effect of Wing-Tip Fuel Tanks on Characteristics of Unswept Wings in Steady Roll. TN 1317, June 1947.
- Deters, Owen J.: Estimation of Control Forces of Spring-Tab Ailerons from Wind-Tunnel Data. TN 1333, June 1947.
- Schade, Robert O.: Effect of Geometric Dihedral on the Aerodynamic Characteristics of Two Isolated Vee-Tail Surfaces. TN 1369, July 1947.

- Lowry, John G. and Crandall, Stewart M.:
 Wind-Tunnel Investigation of Unshielded
 Horn Balances on a Horizontal Tail
 Surface. TN 1377, July 1947.
- Deters, Owen J. and Russell, Robert T.: Investigation of a Spoiler-Type Lateral Control System on a Wing with Full-Span Flaps in the Langley 19-Foot Pressure Tunnel. TN 1409, Aug. 1947.
- Jones, Arthur L.; Flanagan, Mildred G. and Sluder, Loma: An Application of Lifting-Surface Theory to the Prediction of Angle-of-Attack Hinge-Moment Parameters for Aspect Ratio 4.5 Wings. TN 1420, Aug. 1947.
- Deters, Owen J.: Comparison of the Control-Force Characteristics of Two Types of Lateral-Control System for Large Airplanes. TN 1441, Sept. 1947.
- Fischel, Jack and Schneiter, Leslie E.: High-Speed Wind-Tunnel Investigation of High Lift and Aileron-Control Characteristics of an NACA 65-210 Semispan Wing. TN 1473, Nov. 1947.
- Jones, Arthur L. and Sluder, Loma: An Application of Falkner's Surface-Loading Method to Prediction of Hinge-Moment Parameters for Swept-back Wings. TN 1506, Feb. 1948.
- Cleary, Joseph W. and Krumm, Walter J.: High-Speed Aerodynamic Characteristics of Horn and Overhang Balances on a Full-Scale Elevator. RM A7H29, Feb. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. I Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 3. RM A7K24, April 1948.
- Hopkins, Edward J.: A Wind-Tunnel Investigation at Low Speed of Various Lateral Controls on a 45° Swept-Back Wing. RM A7L16, April 1948.
- Fischel, Jack and Ivey, Margaret F.: Collection of Test Data for Lateral Control with Full-Span Flaps. TN 1404, April 1948.
- Tucker, Warren A.: Characteristics of Thin Triangular Wings with Triangular-Tip Control Surfaces at Supersonic Speeds with Mach Lines Behind the Leading Edge. TN 1600, May 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. II Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 4.5. RM A8B11, June 1948.

- Flap Type Controls Complete Wings (Cont.)
- Tucker, Warren A.: Characteristics of Thin Triangular Wings with Constant-Chord Full-Span Control Surfaces at Supersonic Speeds. TN 1601, July 1948.
- Tucker, Warren A. and Nelson, Robert L.: Characteristics of Thin Triangular Wings with Constant-Chord Partial-Span Control Surfaces at Supersonic Speeds. TN 1660, July 1948.
- Lowry, John G. and Schneiter, Leslie E.: Estimation of Effectiveness of Flap-Type Controls on Sweptback Wings. TN 1674, Aug. 1948.
- Tucker, Warren A. and Nelson, Robert L.:
 Theoretical Characteristics in Supersonic Flow of Constant-Chord Partial-Span Control Surfaces on Rectangular Wings Having Finite Thickness. TN 1708, Sept. 1948.
- Toll, Thomas A. and Schneiter, Leslie E.:
 Approximate Relations for HingeMoment Parameters of Control Surfaces on Swept Wings of Low Mach
 Numbers. TN 1711, Oct. 1948.
- Schneiter, Leslie E. and Naeseth, Rodger
 L.: Wind-Tunnel Investigation at Low
 Speed of the Lateral Control Characteristics of Ailerons Having Three
 Spans and Three Trailing-Edge Angles
 on a Semispan Wing Model. TN
 1738, Nov. 1948.
- Dods, Jules, B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. III Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 6. RM A8H30, Dec. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Lattanzi, Bernardino and Bellante, Erno: Wind-Tunnel Tests on Various Types of Dive Brakes Mounted in Proximity of the Leading Edge of the Wing. TM 1161, May 1949.
- Göthert and Röber: Systematic Investigations of the Effects of Plan Form and Gap Between the Fixed Surface and Control Surface on Simple Flapped Wings. TM 1206, May 1949.

- Spoilers (1.2.2.4.2)
- Weick, Fred E. and Wenzinger, Carl J.:
 Preliminary Investigation of Rolling
 Moments Obtained with Spoilers on
 both Slotted and Plain Wings. TN 415,
 April 1932.
- Hübner, Walter and Pleines, Wilhelm: The D.V.L. Gliding-Angle Control (W. Hübner Design). TM 697, Jan. 1933.
- Shortal, J. A.: Effect of Retractable-Spoiler Location on Rolling- and Yawing-Moment Coefficients. TN 499, July 1934.
- Weick, Fred E. and Jones, Robert T.: Résumé and Analysis of NACA Lateral Control Research. Rept. 605, 1937.
- Wenzinger, Carl J. and Rogallo, Francis M.: Wind-Tunnel Investigation of Spoiler Deflector, and Slot Lateral-Control Devices on Wings with Full-Span Split and Slotted Flaps. Rept. 706, 1941.
- Wenzinger, Carl J. and Bowen, John D.:
 Tests of Round and Flat Spoilers on a
 Tapered Wing in the NACA 19-Foot
 Pressure Wind Tunnel. TN 801, March
 1941.
- Rogallo, Francis M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Plain and Slot-Lip Aileron on a Wing with a Full-Span Slotted Flap. ACR (WR L-375), April 1941.
- Rogallo, F. M. and Schuldenfrei, Marvin:
 Wind-Tunnel Investigation of a Plain
 and a Slot-Lip Aileron on a Wing With
 a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Slotted
 Flap. ARR (WR L-421), June 1941.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Development of a Plug-Type Spoiler-Slot Aileron for a Wing with a Full-Span Slotted Flap and a Discussion of Its Application. ARR (WR L-420), Nov. 1941.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Spoiler-Slot Aileron on an NACA 23012 Airfoil with a Full-Span Fowler Flap. ARR (WR L-376), Dec. 1941.
- Lowry, John G. and Liddell, Robert B.:
 Wind-Tunnel Investigation of a Tapered
 Wing with a Plug-Type Spoiler-Slot
 Aileron and Full-Span Slotted Flaps.
 ARR (WR L-250), July 1942.

- Spoilers Complete Wings (Cont.)
- Clousing, Lawrence A. and McAvoy,
 William H.: Flight Measurements of
 the Lateral-Control Characteristics of
 an Airplane Equipped with a Combination Aileron-Spoiler Control System.
 CMR (WR A-68), Sept. 1942.
- Turner, William N. and Adams, Betty:
 Flight Measurements of the Effects of
 a Wing Leading-Edge Slot and Other
 Modifications on the Stability, Maximum Lift, and High Speed of an Observation Airplane. CMR (WR A-88),
 Jan. 1943.
- Spahr, J. Richard and Christopherson, Don R.: Measurements in Flight of the Lateral-Control Characteristics of an Airplane Equipped with Full-Span Zap Flaps and Simple Circular-Arc-Type Ailerons. MR (WR A-28), Dec. 1943.
- Laitone, Edmund V.: An Investigation of the High-Speed Lateral-Control Characteristics of a Spoiler. ACR 4C23, March 1944.
- Laitone, Edmund V.: An Investigation of 0.15-Chord Ailerons on a Low-Drag Tapered Wing at High Speeds. ACR 4I25 (WR A-24), Sept. 1944.
- Laitone, Edmund V. and Summers, James L.: An Additional Investigation of the High-Speed Lateral-Control Characteristics of Spoilers. ACR 5D28 (WR A-21), June 1945.
- Ashkenas, I. L.: The Development of a Lateral-Control System for Use with Large-Span Flaps. TN 1015, Jan. 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Spahr, J. Richard: Lateral-Control Characteristics of Various Spoiler Arrangements as Measured in Flight. TN 1123, Jan. 1947.
- Toll, Thomas A.: Summary of Lateral-Control Research. TN 1245, March 1947.
- Fischel, Jack and Tamburello, Vito: Investigation of Effect of Span, Spanwise Location, and Chordwise Location of Spoilers on Lateral Control Characteristics of a Tapered Wing. TN 1294, May 1947.
- Fitzpatrick, James E. and Furlong, G. Chester: Effect of Spoiler-Type Lateral-Control Devices on the Twisting Moments of a Wing of NACA 230-Series Airfoil Sections. TN 1298, May 1947.

- Deters, Owens J. and Russell, Robert T.:
 Investigation of a Spoiler-Type Lateral Control System on a Wing with
 Full-Span Flaps in the Langley 19Foot Pressure Tunnel. TN 1409,
 Aug. 1947.
- Deters, Owen J.: Comparison of the Control-Force Characteristics of Two Types of Lateral-Control System for Large Airplanes. TN 1441, Sept. 1947.
- Hopkins, Edward J.: A Wind-Tunnel Investigation at Low Speed of Various Lateral Controls on a 45° Swept-Back Wing. RM A7L16, April 1948.
- Fischel, Jack and Ivey, Margaret F.: Collection of Test Data for Lateral Control with Full-Span Flaps. TN 1404, April 1948.
- Schneiter, Leslie E. and Watson, James M.: Low-Speed Wind-Tunnel Investigation of Various Plain-Spoiler Configurations for Lateral Control on a 42° Sweptback Wing. TN 1646, June 1948.
- Fischel, Jack and Schneiter, Leslie E.:
 High-Speed Wind-Tunnel Investigation
 of an NACA 65-210 Semispan Wing
 Equipped with Plug and Retractable
 Ailerons and a Full-Span Slotted Flap.
 TN 1663, July 1948.
- Fischel, Jack: Wind-Tunnel Investigation of an NACA 65-210 Semispan Wing Equipped with Circular Plug Ailerons and a Full-Span Slotted Flap. TN 1802, Jan. 1949,
- Ernst, G. and Kramer, M.: Development of Spoiler Controls for Remote Control of Flying Missiles. TM 1210, March 1949.
- Fischel, Jack and Vogler, Raymond D.:
 High-Lift and Lateral Control Characteristics of an NACA 652-215 Semispan Wing Equipped with Plug and Retractable Ailerons and a Full-Span Slotted Flap. TN 1872, April 1949.
- Fischel, Jack and Watson, James M.: Investigation of Spoiler Ailerons for Use as Speed Brakes or Glide-Path Controls on Two NACA 65-Series Wings Equipped with Full-Span Slotted Flaps. TN 1933, Aug. 1949.

REYNOLDS NUMBER EFFECTS (1.2.2.5)

Diehl, Walter S.: The Variation of Aerofoil Lift and Drag Coefficients with Changes in Size and Speed. Rept. 111, 1921.

- Bacon, D. L.: Preliminary Experiments to Determine Scale and Slip Stream Effects on a 1/24th Size Model of the JN4H Biplane. Rept. 122, 1921.
- Kumbruch, H.: Similitude Tests on Wing Sections. TN 53, April 1921.
- Zahm, A. F.: Influence of Model Surface and Air Flow Texture on Resistance of Aerodynamic Bodies. Rept. 139, 1922.
- Munk, Max M.: Preliminary Wing Model Tests in the Variable Density Wind Tunnel of the National Advisory Committee for Aeronautics. Rept. 217, 1925.
- Pinkerton, Robert M.: Analytical Determination of the Load on a Trailing Edge Flap. TN 353, Oct. 1930.
- Jacobs, Eastman N.: The Aerodynamic Characteristics of Eight Very Thick Airfoils from Tests in the Variable Density Wind Tunnel. Rept. 391, 1931.
- Stack, John: Tests in the Variable Density Wind Tunnel to Investigate the Effects of Scale and Turbulence on Airfoil Characteristics. TN 364, Feb. 1931.
- Silverstein, Abe: Scale Effect on Clark Y Airfoil Characteristics from NACA Full-Scale Wind-Tunnel Tests. Rept. 502, 1934.
- Stuper, J.: Investigation of Boundary Layers on an Airplane Wing in Free Flight. TM 751, Aug. 1934.
- Gurjienko, G.: Universal Logarithmic Law of Velocity Distribution as Applied to the Investigation of Boundary Layer and Drag of Streamline Bodies at Large Reynolds Number. TM 842, Nov. 1937.
- Silverstein, Abe; Katzoff, S. and Hootman, James A.: Comparative Flight and Full-Scale Wind-Tunnel Measurements of the Maximum Lift of an Airplane. Rept. 618, 1938.
- Sherman, Albert: Interference of Wind and Fuselage from Tests of 18 Combinations in the NACA Variable-Density Tunnel Combinations with Split Flaps. TN 640, March 1938.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.

- Bicknell, Joseph: Determination of the Profile Drag of an Airplane Wing in Flight at High Reynolds Numbers. Rept. 667, 1939.
- Hood, Manley J. and Gaydos, M. Edward: Effects of Propellers and of Vibration on the Extent of Laminar Flow on the NACA 27-212 Airfoil. ACR (WR L-784), Oct. 1939.
- Soulé, H. A. and Anderson, R. F.: Design Charts Relating to the Stalling of Tapered Wings. Rept. 703, 1940.
- Bullivant, W. Kenneth: Tests of the NACA 0025 and 0035 Airfoils in the Full-Scale Wind Tunnel. Rept. 708, 1941.
- Muse, Thomas C. and Neely, Robert H.:
 Wind-Tunnel Investigation of an NACA
 66, 2-216 Low-Drag Wing with Split
 Flaps of Various Sizes. ACR, Sept.
 1941.
- Muse, Thomas C. and Neely, Robert H.:
 Wind-Tunnel Investigation of an NACA
 Low-Drag Tapered Wing with Straight
 Trailing Edge and Simple Split Flaps.
 ACR, Dec. 1941.
- Stack, John; Fedziuk, Henry A. and Cleary, Harold E.: Preliminary Investigation of the Effect of Compressibility on the Maximum Lift Coefficient. ACR, Feb. 1943.
- Muse, Thomas C.: Some Effects of Reynolds and Mach Numbers on the Lift of an NACA 0012 Rectangular Wing in the NACA 19-Foot Pressure Tunnel. CB 3E29 (WR L-406), May 1943.
- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.: Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3I30 (WR W-6), Sept. 1943.
- Nissen, James M. and Gadeberg, Burnett
 L.: Effect of Mach and Reynolds Number on the Power-Off Maximum Lift
 Coefficient Obtainable on a P-39N-1
 Airplane as Determined in Flight. ACR
 4F28, June 1944.
- Nissen, James M.; Gadeberg, Burnett L. and Hamilton, William T.: Correlation of the Drag Characteristics of a P-51B Airplane Obtained from High-Speed Wind Tunnel and Flight Tests. ACR 4K02 (WR A-62), Feb. 1945.
- Spreiter, John R.; Galster, George M. and Blair, William K.: Effect of Mach and Reynolds Numbers on the Maximum Lift Coefficient Obtainable in Gradual and Abrupt Stalls of a Pursuit Airplane Equipped with Low-Drag Wing. MR A5G06 (WR A-5), July 1945.

- Reynolds No. Effects Complete Wings (Cont.)
- Spreiter, John R. and Steffen, Paul J.: The Effect of Mach and Reynolds Numbers on Maximum Lift Coefficient. TN 1044, March 1946.
- Jones, Robert T.: Effects of Sweepback on Boundary Layer and Separation. Rept. 884, 1947.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.
- Brown, Harvey H. and Clousing, Lawrence A.: Wind Pressure-Distribution Measurements up to 0.866 Mach Number in Flight on a Jet-Propelled Airplane. TN 1181, March 1947.
- Conner, D. William: Effect of Reflex Camber on the Aerodynamic Characteristics of a Highly Tapered Moderately Swept-Back Wing at Reynolds Numbers up to 8,000,000. TN 1212, March 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Furlong, G. Chester and Fitzpatrick, James E.: Effects of Mach Number and Reynolds Number on the Maximum Lift Coefficient of a Wing of NACA 230-Series Airfoil Sections. TN 1299, May 1947.
- Lees, Lester: The Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1360, July 1947.
- Fischel, Jack and Schneiter, Leslie E.: High-Speed Wind-Tunnel Investigation of High Lift and Aileron-Control Characteristics of an NACA 65-210 Semispan Wing. TN 1473, Nov. 1947.
- Sivells, James C. and Spooner, Stanley H.: Investigation in the Langley 19-Foot Pressure Tunnel of Two Wings of NACA 65-210 and 64-210 Airfoil Sections with Various Type Flaps. TN 1579, May 1948.
- Davis, Don D., Jr. and Sweberg, Harold H.: Investigation of Some Factors Affecting Comparisons of Wind-Tunnel and Flight Measurements of Maximum Lift Coefficients for a Fighter-Type Airplane. TN 1639, June 1948.
- Fischel, Jack and Schneiter, Leslie E.:
 High-Speed Wind-Tunnel Investigation
 of an NACA 65-210 Semispan Wing
 Equipped with Plug and Retractable
 Ailerons and a Full-Span Slotted Flap.
 TN 1663, July 1948.

- Bollech, Thomas V.: Experimental and Calculated Characteristics of Several High-Aspect-Ratio Tapered Wings Incorporating NACA 44-Series, 230-Series, and Low-Drag 64-Series Airfoil Sections. TN 1677, Sept. 1948.
- Cooper, Morton and Korycinski, Peter F.: The Effects of Compressibility on the Lift, Pressure, and Load Characteristics of a Tapered Wing of NACA 66-Series Airfoil Sections. TN 1697, Oct. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- West, F. E., Jr. and Hallissy, J. M., Jr.:
 Effects of Compressibility on NormalForce, Pressure, and Load Characteristics of a Tapered Wing of NACA
 66-Series Airfoil Sections with Split
 Flaps. TN 1759, Dec. 1948.
- Fischel, Jack: Wind-Tunnel Investigation of an NACA 65-210 Semispan Wing Equipped with Circular Plug Ailerons and a Full-Span Slotted Flap. TN 1802, Jan. 1949.
- West, F. E., Jr. and Himka, T.: Effects of Compressibility on Lift and Load Characteristics of a Tapered Wing of NACA 64-210 Airfoil Sections up to a Mach Number of 0.60. TN 1877, May 1949.
- Fischel, Jack and Watson, James M.: Investigation of Spoiler Ailerons for use as Speed Brakes or Glide-Path Controls on Two NACA 65-Series Wings Equipped with Full-Span Slotted Flaps. TN 1933, Aug. 1949.

MACH NUMBER EFFECTS (1.2.2.6)

- Bacon, D. L.: Preliminary Experiments to Determine Scale and Slip Stream Effects on a 1/24th Size Model of a JN4H Biplane. Rept. 122, 1921.
- Draley, Eugene C.: High-Speed Drag Tests of Several Fuselage Shapes in Combination with a Wing. ACR (WR L-542), Aug. 1940.
- Becker, John V. and Leonard, Lloyd H.: High-Speed Tests of a Model Twin-Engine Low-Wing Transport Airplane. Rept. 750, 1942.
- Erickson, Albert L.: Investigation of Diving Moments of a Pursuit Airplane in the Ames 16-Foot High-Speed Wind Tunnel. CMR (WR A-65), Oct. 1942.

- Mach No. Effects Complete Wings (Cont.)
- Ganzer, Victor M.: High-Speed Wind-Tunnel Tests of a 1/6-Scale Model of a Twin-Engine Pursuit Airplane. CMR (WR A-91), Dec. 1942.
- Hood, Manley J. and Allen, H. Julian: The Problem of Longitudinal Stability and Control at High Speeds. Rept. 767, 1943.
- Delano, James B.: Pressure Distribution on the Fuselage of a Midwing Airplane Model at High Speeds. TN 890, Feb. 1943.
- Hamilton, William T.: High-Speed Wind-Tunnel Tests of a 1/14-Scale Model of a Four Engine Transport Airplane. MR (WR A-69), Feb. 1943.
- Stack, John; Fedziuk, Henry A. and Cleary, Harold E.: Preliminary Investigation of the Effect of Compressibility on the Maximum Lift Coefficient. ACR, Feb. 1943.
- Laitone, Edmund V.: Investigation of the Longitudinal Stability at High Speeds of a 1/5-Scale Model of a Tailless Pursuit Airplane. MR (WR A-77), March 1943.
- Pearson, H. A.: Time-Velocity-Altitude Relations for an Airplane Diving in a Standard Atmosphere. ARR (WR L-291), March 1943.
- Erickson, Albert L.: Wind-Tunnel Investigation of Devices for Improving the Diving Characteristics of Airplanes. MR 3F12 (WR A-66), April 1943.
- Muse, Thomas C.: Some Effects of Reynolds and Mach Numbers on the Lift of an NACA 0012 Rectangular Wing in the NACA 19-Foot Pressure Tunnel. CB 3E29 (WR L-406), May 1943.
- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.: Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3I30 (WR W-6), Sept. 1943.
- Barnes, Robert H.: High-Speed Aerodynamic Characteristics of a Four-Engine Bomber Airplane as Determined from Tests of an 0.075-Scale Model. RMR (WR A-82), Jan. 1944.
- Ganzer, Victor M.: The Effects of a Highly Cambered Low-Drag Wing and of Auxiliary Flaps on the High-Speed Aerodynamic Characteristics of a Twin-Engine Pursuit Airplane Model. MR (WR A-90), Feb. 1944.

- Laitone, Edmund V.: An Investigation of the High-Speed Lateral-Control Characteristics of a Spoiler. ACR 4C23, March 1944.
- Pearson, E. O., Jr.: Aerodynamic Tests of an AN-M-65-Azon 1000-Pound Radio-Controlled Bomb in the LMAL 16-Foot High-Speed Tunnel. MR (WR L-131), June 1944.
- Nissen, James M. and Gadeberg, Burnett
 L.: Effect of Mach and Reynolds Number on the Power-Off Maximum Lift
 Coefficient Obtainable on a P-39N-1
 Airplane as Determined in Flight.
 ACR 4F28, June 1944.
- Laitone, Edmund V.: An Investigation of 0.15-Chord Ailerons on a Low-Drag Tapered Wing at High Speeds. ACR 4I25 (WR A-24), Sept. 1944.
- Nissen, James M.; Gadeberg, Burnett L. and Hamilton, William T.: Correlation of the Drag Characteristics of a P-51B Airplane Obtained from High-Speed Wind Tunnel and Flight Tests. ACR 4K02 (WR A-62), Feb. 1945.
- Gasich, Welko E. and Clousing, Lawrence A.: Flight Investigation of the Variation of Drag Coefficient with Mach Number for the Bell P-39N-1 Airplane. ACR 5D04, May 1945.
- Hamilton, William T. and Boddy, Lee E.:
 High-Speed Wind-Tunnel Tests of DiveRecovery Flaps on a 0.3-Scale Model
 of the P-47D Airplane. ACR 5D19,
 May 1945.
- Robinson, Robert C. and Jessen, Henry:
 The Effect of Mach Number on the
 Aerodynamic Characteristics of a
 Single-Engine Pursuit Airplane as Determined from Tests of a 1/3-Scale
 Model. MR A5E03 (WR A-76), May
 1945.
- Laitone, Edmund V. and Summers, James L.: An Additional Investigation of the High-Speed Lateral-Control Characteristics of Spoilers. ACR 5D28 (WR A-21), June 1945.
- Bailey, F. J., Jr; Mathews, Charles W. and Thompson, Jim Rogers: Drag Measurements at Transonic Speeds on a Freely Falling Body. ACR L5E03, June 1945.
- Schueler, Carl F. and Korycinski, Peter F.: Effect of Fabric Deflection at High Speeds on the Aerodynamic Characteristics of the Horizontal Tail Surface of an SB2D-1 Airplane. ARR L5F01a (WR L-170), June 1945.

- Mach No. Effects Complete Wings (Cont.)
- Spreiter, John R.; Galster, George M. and Blair, William K.: Effect of Mach and Reynolds Numbers on the Maximum Lift Coefficient Obtainable in Gradual and Abrupt Stalls of a Pursuit Airplane Equipped with Low-Drag Wing. MR A5G06 (WR A-5), July 1945.
- Daum, Fred L. and Sawyer, Richard H.:
 Tests at Transonic Speeds of the Effectiveness of a Swept-Back Trailing-Edge Flap on an Airfoil Having Parallel Flat Surfaces, Extreme Sweepback, and Low Aspect Ratio. CB L5H01, Sept. 1945.
- Stack, John and Lindsey, W. F.: Characteristics of Low-Aspect-Ratio Wings at Supercritical Mach Numbers. ACR L5J16, Oct. 1945.
- Pearson, E. O., Jr.; Evans, A. J. and West, Franklin E., Jr.: Effects of Compressibility on the Maximum Lift Characteristics and Spanwise Load Distribution of a 12-Foot-Span Fighter-Type Wing of NACA 230-Series Airfoil Sections. ACR L5G10 (WR L-51), Nov. 1945.
- Jones, Robert T.: Properties of Low-Aspect-Ratio Pointed Wings at Speeds Below and Above the Speed of Sound. Rept. 835, 1946.
- Clousing, Lawrence A.; Turner, William N. and Rolls, L. Stewart: Measurements in Flight of the Pressure Distribution on the Right Wing of a P-39N-1 Airplane at Several Values of Mach Number. Rept. 859, 1946.
- Jones, Robert T.: Wing Plan Forms for High-Speed Flight. Rept. 863, 1946.
- Spreiter, John R. and Steffen, Paul J.: Effect of Mach and Reynolds Numbers on Maximum Lift Coefficient. TN 1044, March 1946.
- Spreiter, John R. and Galster, George M.:
 Observations of Aileron Flutter on
 the Bell P-63A-6 Airplane in Flight
 at High Mach Numbers. ACR 6B08,
 April 1946.
- Anderson, Joseph L. and Tkac, Victor B.:
 High-Speed Wind-Tunnel Tests of a
 Model of the North American XP-82
 Airplane. MR A6D03 (WR A-75), April
 1946.
- Lowry, John G. and Turner, Thomas R.:
 Pressure Distribution over a PlugType Spoiler-Slot Aileron on a Tapered
 Wing with Full-Span Slotted Flaps. TN
 1079, June 1946.

- Gothert, B.: Plane and Three-Dimensional Flow at High Subsonic Speeds. TM 1105, Oct. 1946.
- Jones, Robert T.: Wing Planforms for High-Speed Flight. Rept. 863, 1947.
- Robinson, Robert C. and Perone, Angelo: The High-Speed Longitudinal Stability and Control of the Bell P-39N-1 Airplane as Calculated from Propeller-Off Tests of a 0.35-Scale Model. RM A6L27, Jan. 1947.
- Klein, Milton M.: Pressure Distributions and Force Tests of an NACA 65-210 Airfoil Section with a 50-Percent-Chord Flap. TN 1167, Jan. 1947.
- Ellis, Macon C., Jr. and Hasel, Lowell E.: Preliminary Tests at Supersonic Speeds of Triangular and Swept-Back Wings. RM L6L17, Feb. 1947.
- Brown, Harvey H. and Clousing, Lawrence A.: Wing Pressure-Distribution Measurements up to 0.866 Mach Number in Flight on a Jet-Propelled Airplane. TN 1181, March 1947.
- Göthert, B.: High-Speed Measurements on a Swept-Back Wing. (Sweepback Angle = 35°) TM 1102, March 1947.
- Beeler, De E.: Air-Flow Behavior over the Wing of an XP-51 Airplane as Indicated by Wing-Surface Tufts at Subcritical and Supercritical Speeds. RM L6L03, April 1947.
- Dryden, Hugh L.: Some Recent Contributions to the Study of Transition and Turbulent Boundary Layers. TN 1168, April 1947.
- Furlong, G. Chester and Fitzpatrick, James E.: Effects of Mach Number and Reynolds Number on the Maximum Lift Coefficient of a Wing of NACA 230-Series Airfoil Sections. TN 1299, May 1947.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Jones, Robert T.: Subsonic Flow over Thin Oblique Airfoils at Zero Lift. TN 1340, June 1947.
- Schueller, Carl F.: Pressure-Distribution Measurements on a Full-Scale Horizontal Tail Surface for a Mach Number Range of 0.20 to 0.70. RM L7D08, June 1947.
- Jacobs, W.: Pressure-Distribution Measurements on Unyawed Swept-Back Wings. TM 1164, July 1947.

- Mach No. Effects Complete Wings (Cont.)
- Lees, Lester: The Stability of the Laminar Boundary Layer in a Compressible Fluid. TN 1360, July 1947.
- Evvard, John C .: Distribution of Wave Drag and Lift in the Vicinity of Wing Tips at Supersonic Speeds. TN 1382, July 1947.
- Pearson, E. O., Jr.: Effect of Compressibility on the Distribution of Pressures over a Tapered Wing of NACA 230-Series Airfoil Sections. TN 1390, July 1947.
- Heaslet, Max A.; Lomax, Harvard and Jones, Arthur L.: Volterra's Solution of the Wave Equation as Applied to Three-Dimensional Supersonic Airfoil Problems. TN 1412, Aug. 1947.
- Barnes, Robert H.: High-Speed Load Dis-tribution on the Wing of a 3/16-Scale Model of a Scout-Bomber Airplane with Flaps Deflected. RM A7D23, Aug. 1947.
- Margolis, Kenneth: Supersonic Wave Drag of Sweptback Tapered Wings at Zero Lift. TN 1448, Oct. 1947.
- Harmon, Sidney M .: Theoretical Supersonic Wave Drag of Untapered Sweptback and Rectangular Wings at Zero Lift. TN 1449, Oct. 1947.
- Fischel, Jack and Schneiter, Leslie E .: High-Speed Wind-Tunnel Investigation of High Lift and Aileron-Control Characteristics of an NACA 65-210 Semispan Wing. TN 1473, Nov. 1947.
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.
- Nielsen, Jack N.: Effect of Aspect Ratio and Taper on the Pressure Drag at Supersonic Speeds of Unswept Wings at Zero Lift. TN 1487, Nov. 1947.
- Rolls, L. Stewart: Comparison Between Flight Measured and Calculated Span Load Distribution at High Mach Numbers. RM A7G17, Nov. 1947.
- Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.
- Cleary, Joseph W. and Krumm, Walter J .: High-Speed Aerodynamic Characteristics of Horn and Overhang Balances on a Full-Scale Elevator. RM A7H29, Feb. 1948.

- Margolis, Kenneth: Effect of Chordwise Location of Maximum Thickness on the Supersonic Wave Drag of Swept-back Wings. TN 1543, March 1948.
- Jones, Arthur L. and Alksne, Alberta: The Damping Due to Roll of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1548, March 1948.
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Kehl: Wind-Tunnel Measurements on the Wing of the Henschel Missile "Zitterrochen" in Subsonic and Supersonic Velocities. TM 1159, April 1948.
- Brown, Clinton E. and Adams, Mac C .: Damping in Pitch and Roll of Triangular Wings at Supersonic Speeds. TN 1566, April 1948.
- Ribner, Herbert S. and Malvestuto, Frank S., Jr.: Stability Derivatives of Triangular Wings at Supersonic Speeds. TN 1572, May 1948.
- Evvard, John C .: Theoretical Distribution of Lift on Thin Wings at Supersonic Speeds (An Extension). TN 1585, May 1948.
- Tucker, Warren A.: Characteristics of Thin Triangular Wings with Triangular-Tip Control Surfaces at Supersonic Speeds with Mach Lines Behind the Leading Adge. TN 1600, May 1948.
- Cooper, George E. and Rathert, George A., Jr.: Visual Observations of the Shock Wave in Flight. RM A8C25, May 1948.
- Heaslet, Max A. and Lomax, Harvard: The Calculation of Downwash Behind Supersonic Wings with an Application to Triangular Plan Forms. TN 1620, June 1948.
- Tucker, Warren A.: Characteristics of Thin Triangular Wings with Constant-Chord Full-Span Control Surfaces at Supersonic Speeds. TN 1601, July 1948.
- Tucker, Warren A. and Nelson, Robert L .: Characteristics of Thin Triangular Wings with Constant-Chord Partial-Span Control Surfaces at Supersonic Speeds. TN 1660, July 1948.
- Fischel, Jack and Schneiter, Leslie E .: High-Speed Wind-Tunnel Investigation of an NACA 65-210 Semispan Wing Equipped with Plug and Retractable Ailerons and a Full-Span Slotted Flap. TN 1663, July 1948.

- Mach No. Effects Complete Wings (Cont.)
- Stack, John and Lindsey, W. F.: Characteristics of Low-Aspect-Ratio Wings at Supércritical Mach Numbers. TN 1665, Aug. 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Margolis, Kenneth: Supersonic Wave Drag of Nonlifting Sweptback Tapered Wings with Mach Lines Behind the Line of Maximum Thickness. TN 1672, Aug. 1948.
- Jones, Arthur L.; Spreiter, John R. and Alksne, Alberta: The Rolling Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1700, Sept. 1948.
- Tucker, Warren A. and Nelson, Robert L.:
 Theoretical Characteristics in Supersonic Flow of Constant-Chord Partial-Span Control Surfaces on Rectangular Wings Having Finite Thickness. TN 1708, Sept. 1948.
- Wall, Nancy E.: Chordwise Pressure Distributions on a 12-Foot-Span Wing of NACA 66-Series Airfoil Sections up to a Mach Number of 0.60. TN 1696, Oct. 1948.
- Cooper, Morton and Korycinski, Peter F.: The Effects of Compressibility on the Lift, Pressure, and Load Characteristics of a Tapered Wing of NACA 66-Series Airfoil Sections. TN 1697, Oct. 1948.
- Hieser, Gerald and Whitcomb, Charles F.: Investigation of the Effects of a Nacelle on the Aerodynamic Characteristics of a Swept Wing and the Effects of Sweep on a Wing Alone. TN 1709, Oct. 1948.
- Stokke, Allen R. and Aiken, William S., Jr.: Flight Measurements of Buffeting Tail Loads. TN 1719, Oct. 1948.
- Aiken, William S., Jr.: Flight Determination of Wing and Tail Loads on a Fighter-Type Airplane by Means of Strain-Gage Measurements. TN 1729, Oct. 1948.
- Harper, Paul W. and Flanigan, Roy E.: Investigation of the Variation of Maximum Lift for a Pitching Airplane Model and Comparison with Flight Results. TN 1734, Oct. 1948.
- Murray, Harry E.: Comparison with Experiment of Several Methods of Predicting the Lift of Wings in Subsonic Compressible Flow. TN 1739, Oct. 1948.

- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.
- West, F. E., Jr. and Hallissy, J. M., Jr.: Effects of Compressibility on Normal-Force, Pressure, and Load Characteristics of a Tapered Wing of NACA 66-Series Airfoil Sections with Split Flaps. TN 1759, Dec. 1948.
- Tucker, Warren A. and Nelson, Robert L.: The Flexible Rectangular Wing in Roll at Supersonic Flight Speeds. TN 1769, Dec. 1948.
- Malvestuto, Frank S., Jr. and Margolis, Kenneth: Theoretical Stability Derivatives of Thin Sweptback Wings Tapered to a Point with Sweptback or Sweptforward Trailing Edges for a Limited Range of Supersonic Speeds. TN 1761, Jan. 1949.
- Margolis, Kenneth: Effect of Thickness on the Lateral Force and Yawing Moment of a Sideslipping Delta Wing at Supersonic Speeds. TN 1798, Jan. 1949.
- Fischel, Jack: Wind-Tunnel Investigation of an NACA 65-210 Semispan Wing Equipped with Circular Plug Ailerons and a Full-Span Slotted Flap. TN 1802, Jan. 1949.
- Lomax, Harvard and Sluder, Loma: Downwash in the Vertical and Horizontal Planes of Symmetry Behind a Triangular Wing in Supersonic Flow. TN 1803, Jan. 1949.
- Jones, Arthur L. and Alksne, Alberta: The Yawing Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1850, April 1949.
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.
- Polhamus, Edward C.: A Simple Method of Estimating the Subsonic Lift and Damping in Roll of Sweptback Wings. TN 1862, April 1949.
- Malvestuto, Frank S., Jr.; Margolis, Kenneth and Ribner, Herbert S.: Theoretical Lift and Damping in Roll of Thin Sweptback Wings of Arbitrary Taper and Sweep at Supersonic Speeds. Subsonic Leading Edges and Supersonic Trailing Edges. TN 1860, April 1949.

- Mach No. Effects Complete Wings (Cont.)
- West, F. E., Jr. and Himka, T.: Effects of Compressibility on Lift and Load Characteristics of a Tapered Wing of NACA 64-210 Airfoil Sections up to a Mach Number of 0.60. TN 1877, May 1949.
- Tucker, Warren A. and Nelson, Robert L.: The Effect of Torsional Flexibility on the Rolling Characteristics at Supersonic Speeds of Tapered Unswept Wings. TN 1890, June 1949.
- Göthert, B.: Airfoil Measurements in the DVL High-Speed Wind Tunnel (2.7-Meter Diameter). TM 1240, June 1940.
- Fischel, Jack and Watson, James M.: Investigation of Spoiler Ailerons for Use as Speed Brakes or Glide-Path Controls on Two NACA 65-Series Wings Equipped with Full-Span Slotted Flaps. TN 1933, Aug. 1949.
- Binckley, E. T. and Funk, Jack: A Flight Investigation of the Effects of Compressibility on Applied Gust Loads. TN 1937, Aug. 1949.

WAKE (1.2.2.7)

- Diehl, Walter S.: The Determination of Downwash. TN 42, Jan. 1921.
- Munk, Max and Cario, Gunther: Downwash of Airplane Wings. TN 124, Jan. 1923.
- Petersohn, E.: Downwash Measurements Behind Wings with Detached Flow. TM 632, Aug. 1931.
- Betz, A. and Lotz, J.: Reduction of Wing Lift by the Drag. TM 681, Aug. 1932.
- Platt, Robert C.: Aerodynamic Characteristics of a Wing with Fowler Flaps Including Flap Loads, Downwash, and Calculated Effect on Take-Off. Rept. 534, 1935.
- Silverstein, Abe and White, James A.:
 Wind-Tunnel Interference with Particular Reference to Off-Center Positions of the Wing and to the Downwash at the Tail. Rept. 547, 1935.
- Muttray, H.: Investigations on the Amount of Downwash Behind Rectangular and Elliptical Wings. TM 787, Feb. 1936.
- Lotz, Irmgard: Correction of Downwash in Wind Tunnels of Circular and Elliptic Sections. TM 801, July 1936.
- Silverstein, Abe and Katzoff, S.: Experimental Investigation of Wind-Tunnel Interference on the Downwash Behind an Airfoil. Rept. 609, 1937.

- Muttray, H.: Investigations on the Downwash Behind a Tapered Wing with Fuselage and Propeller. TM 876, Sept. 1938.
- Silverstein, Abe and Katzoff, S.: Design Charts for Predicting Downwash Angles and Wake Characteristics Behind Plain and Flapped Wings. Rept. 648, 1939.
- Silverstein, Abe; Katzoff, S. and Bullivant, W. Kenneth: Downwash and Wake Behind Plain and Flapped Airfoils. Rept. 651, 1939.
- Goett, Harry J.: Experimental Investigation of the Momentum Method for Determining Profile Drag. Rept. 660, 1939.
- Bicknell, Joseph: Determination of the Profile Drag of an Airplane Wing in Flight at High Reynolds Numbers. Rept. 667, 1939.
- Sherman, Albert: Interference of Tail Surfaces and Wing and Fuselage from Tests of 17 Combinations in the NACA Variable-Density Tunnel. Rept. 678, 1939.
- Katzoff, S.: Longitudinal Stability and Control with Special Reference to Slipstream Effects. Rept. 690, 1940.
- Jones, Robert T. and Fehlner, Leo F.: Transient Effects of the Wing Wake on the Horizontal Tail. TN 771, Aug. 1940.
- Purser, Paul E. and Turner, Thomas R.: Wind-Tunnel Investigation of Perforated Split Flaps for Use as Dive Brakes on a Rectangular NACA 23012 Airfoil. ACR (WR L-445), July 1941.
- Eujen, E.: Prediction of Downwash and Dynamic Pressure at the Tail from Free-Flight Measurements. TM 1021, July 1942.
- Pass, H. R.: Wind-Tunnel Study of the Effects of Propeller Operation and Flap Deflection on the Pitching Moments and Elevator Hinge Moments of a Single-Engine Pursuit-Type Airplane. ARR (WR L-411), July 1942.
- Sweberg, Harold H.: The Effect of Propeller Operation on the Air Flow in the Region of the Tail Plane for a Twin-Engine Tractor Monoplane. ARR (WR L-381), Aug. 1942.
- Recant, I. G. and Wallace, A. R.: Effect of Ground on Characteristics of a Model of a Low-Wing Airplane with Full-Span Slotted Flap with and Without Power. ARR (WR L-335), Sept. 1942.

- Wake Complete Wings (Cont.)
- Cohen, Doris: Theoretical Distribution of Load over a Swept-Back Wing. ARR (WR L-221), Oct. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Ganzer, Victor M.: High-Speed Wind-Tunnel Tests of a 1/6-Scale Model of a Twin-Engine Pursuit Airplane. CMR (WR A-91), Dec. 1942.
- Katzoff, S. and Sweberg, Harold H.: Ground Effect on Downwash Angles and Wake Location. Rept. 738, 1943.
- Davis, Wallace F.: Comparison of Various Methods for Computing Drag from Wake Surveys. ARR (WR W-4), Jan. 1943.
- Sweberg, Harold H.: Air-Flow Surveys in the Region of the Tail Surfaces of a Single-Engine Airplane Equipped with Dual-Rotating Propellers. ACR (WR L-424), March 1943.
- Dingeldein, Richard C.: Full-Scale Tunnel Investigation of the Pressure Distribution over the Tail of the P-47B Airplane. ARR 3E25 (WR L-439), May 1943.
- Katzoff, S. and Finn, Robert S.: Note on the Interpretation of Wake-Survey Data and Its Use in the Estimation of Induced Drag Due to Irregularities. MR (WR L-639), Jan. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Effects of Propeller Operation and Angle of Yaw on the Distribution of the Load on the Horizontal Tail Surface of a Typical Pursuit Airplane. ARR 4B10 (WR L-227), Feb. 1944.
- Goranson, R. Fabian: A Method for Predicting the Elevator Deflection Required to Land. ARR L4I16 (WR L-95), Sept. 1944.
- Nielsen, Jack N. and Sweberg, Harold H.: Note on Compressibility Effects on Downwash at the Tail at Subcritical Speeds. CB L5C09 (WR L-19), March 1945.
- Block, Myron J. and Katzoff, S.: Tables and Charts for the Evaluation of Profile Drag from Wake Surveys at High Subsonic Speeds. RB L5F15a (WR L-107), June 1945.

- Baals, Donald D. and Mourhess, Mary J.:
 Numerical Evaluation of the WakeSurvey Equations for Subsonic Flow
 Including the Effect of Energy Addition.
 ARR L5H27 (WR L-5), Nov. 1945.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Blenk, Hermann: The Monoplane as a Lifting Vortex Surface. TM 1111, Feb. 1947.
- Beeler, De E. and Gerard, George: Wake Measurements Behind a Wing Section of a Fighter Airplane in Fast Dives. TN 1190, March 1947.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Purser, Paul E.; Spearman, M. Leroy and Bates, William R.: Preliminary Investigation at Low Speed of Downwash Characteristics of Small-Scale Sweptback Wings. TN 1378, July 1947.
- Greenberg, J. Mayo: Some Considerations on an Airfoil in an Oscillating Stream. TN 1372, Aug. 1947.
- Evvard, John C. and Turner, L. Richard: Theoretical Lift Distribution and Upwash Velocities for Thin Wings at Supersonic Speeds. TN 1484, Nov. 1947.
- Evvard, John C.: Theoretical Distribution of Lift on Thin Wings at Supersonic Speeds (An Extension). TN 1585, May 1948.
- Heaslet, Max A. and Lomax, Harvard: The Calculation of Downwash Behind Supersonic Wings with an Application to Triangular Plan Forms. TN 1620, June 1948.
- Hoggard, H. Page, Jr. and Hagerman, John R.: Downwash and Wake Behind Untapered Wings of Various Aspect Ratios and Angles of Sweep. TN 1703, Oct. 1948.
- Gale, Lawrence J. and Jones, Ira P., Jr.:
 Effects of Antispin Fillets and Dorsal
 Fins on the Spin and Recovery Characteristics of Airplanes as Determined
 from Free-Spinning-Tunnel Tests. TN
 1779, Dec. 1948.
- Nielsen, Jack N. and Perkins, Edward W.: Charts for the Conical Part of the Downwash Field of Swept Wings at Supersonic Speeds. TN 1780, Dec. 1948.

- Wake Complete Wings (Cont.)
- McCormack, Gerald M. and Cook, Woodrow L.: A Study of Stall Phenomena on a 45° Swept-Forward Wing. TN 1797, Jan. 1949.
- Lomax, Harvard and Sluder, Loma: Downwash in the Vertical and Horizontal Planes of Symmetry Behind a Triangular Wing in Supersonic Flow. TN 1803, Jan. 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II - Turbulent Flows. TM 1218, April 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Mirels, Harold and Haefeli, Rudolph C.: Line-Vortex Theory for Calculation of Supersonic Downwash. TN 1925, Aug. 1949.

BOUNDARY LAYER (1.2.2.8)

- Ackeret, J.: Removing Boundary Layer by Suction. TM 395, Jan. 1926.
- Ackeret, J.; Betz, A. and Schrenk, O.: Experiments with an Airfoil from Which the Boundary Layer is Removed by Suction. TM 374, Aug. 1926.
- Seewald, F.: Increasing Lift by Releasing Compressed Air on Suction Side of Airfoil. TM 441, Dec. 1927.
- Reid, E. G. and Bamber, M. J.: Preliminary Investigation on Boundary Layer Control by Means of Suction and Pressure with the USA-27 Airfoil. TN 286, May 1928.
- Wieland, K.: Experiments with A Wing from Which the Boundary Layer is Removed by Pressure or Suction. TM 472, July 1928.

- Katzmayr, Richard: Wings with Nozzle-Shaped Slots. TM 521, July 1929.
- Schrenk, Oskar: Experiments with a Wing Model from Which the Boundary is Removed by Suction. TM 534, Oct. 1929.
- Schrenk, Oskar: Experiments with a Wing from Which the Boundary Layer is Removed by Suction. TM 634, Aug. 1931.
- Schrenk, O.: Experiments with Suction-Type Wings. TM 773, Aug. 1935.
- Schrenk, O.: Boundary Layer Removal by Suction. TM 974, April 1941.
- Wetmore, J. W.; Zalovcik, J. A. and Platt, Robert C.: A Flight Investigation of the Boundary-Layer Characteristics and Profile Drag of the NACA 35-215 Laminar-Flow Airfoil at High Reynolds Numbers. MR (WR L-532), May 1941.
- Zalovcik, John A.; Wetmore, J. W. and von Doenhoff, Albert E.: Flight Investigation of Boundary-Layer Control by Suction Slots on an NACA 35-215 Low-Drag Airfoil at High Reynolds Numbers. ACR 4B29 (WR L-521), Feb. 1944.
- Freeman, Hugh B.: Boundary-Layer-Control Tests of Two Wings in the Langley Propeller-Research Tunnel. TN 1007, Jan. 1946.
- Krüger, W.: Calculations and Experimental Investigations on the Feed-Power Requirement of Airplanes with Boundary-Layer Control. TM 1167, Sept. 1947.
- Brennecke: Maintaining Laminar Flow in the Boundary Layer Using a Swept-Back Wing. TM 1180, Feb. 1948.
- Horton, Elmer A. and Quinn, John H., Jr.:
 Analysis of the Effects of BoundaryLayer Control on the Take-Off Performance Characteristics of a LiaisonType Airplane. TN 1597, June 1948.

Bodies

(1.3)

- Wilson, Edwin Bidwell: Bomb Trajectories. Rept. 79, 1920.
- Munk, Max M.: The Drag of Zeppelin Airships. Rept. 117, 1921.
- Toussaint and Hayer: Extract from a Report on the Resistance of Spheres of Small Diameter in an Airstream of High Velocity. TN 45, March 1921.
- Riabouchinski, D.: On the Resistance of the Air at High Speeds and on the Automatic Rotation of Projectiles. TN 49, April 1921.
- Bacon, D. L. and Reid, E.G.: The Resistance of Spheres in Wind Tunnels and in Air. Rept. 185, 1924.
- Anon.: Experiments on the Resistance of Airplane Wheels and Radiators. TM 269, July 1924.
- Anon.: Pressure Distribution on Fuselage of Airplane Model. TM 300, Feb. 1925.
- Fairbanks, Karl J.: Pressure Distribution on the Nose of an Airship in Circling Flight. TN 224, Aug. 1925.
- Crowley, J. W., Jr. and DeFrance, S. J.: Pressure Distribution on the C-7 Airship. Rept. 223, 1926.
- Havill, Clinton H.: The Drag of Airships. TN 247, Sept. 1926.
- Havill, Clinton H.: The Drag of Airships. II Drag of Bare Hulls. TN 248, Oct. 1926.
- Shoemaker, James M.: Resistance of a Fifteen-Centimeter Disk. TN 252, Dec. 1926.
- Gough, Melvin N.: The Effect of Fillets Between Wings and Fuselage on the Drag and Propulsive Efficiency of an Airplane. TN 299, Oct. 1928.
- Von Kármán, Théodor: Calculation of Pressure Distribution on Airship Hulls. TM 574, July 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: Pressure Distribution over the Fuselage of a PW-9 Pursuit Airplane in Flight. Rept. 380, 1931.
- Thompson, F. L. and Kirschbaum, H. W.: The Drag Characteristics of Several Airships Determined by Deceleration Tests. Rept. 397, 1931.

- Freeman, Hugh B.: Pressure-Distribution Measurements on the Hull and Fins of a 1/40-Scale Model of the U.S. Airship "Akron." Rept. 443, 1932.
- Gough, Melvin N. and Johnson, Ernest: Methods of Visually Determining the Air Flow Around Airplanes. TN 425, July 1932.
- Dearborn, C. H.: Full-Scale Drag Tests of Landing Lamps. TN 497, May 1934.
- Kaplan, Carl: Potential Flow About Elongated Bodies of Revolution. Rept. 516, 1935.
- Gurjienko, G.: Universal Logarithmic Law of Velocity Distribution as Applied to the Investigation of Boundary Layer and Drag of Streamline Bodies at Large Reynolds Number. TM 842, Nov. 1937.
- Barth, W.: Theoretical and Experimental Investigations of the Drag of Installed Aircraft Radiators. TM 932, Feb. 1940.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Fuselage Stability in Yaw with Various Arrangements of Fins. TN 785, Nov. 1940.
- Stamm, G.: Investigations of Pressure Distribution on Fast Flying Bodies. TM 1101, Sept. 1946.
- Heaslet, Max A. and Nitzberg, Gerald E.: The Calculation of Drag for Airfoil Sections and Bodies of Revolution at Subcritical Speeds. RM A7B06, April 1947.
- Webster, A. P.: Free-Falls and Parachute Descents in the Standard Atmosphere. TN 1315, June 1947.
- Perl, W.: Calculation of Compressible Flows Past Aerodynamic Shapes by Use of the Streamline Curvature. TN 1328, June 1947.

THEORY

(1.3.1)

Prandtl, L.: Applications of Modern Hydrodynamics to Aeronautics. Rept. 116, 1921.

- Riabouchinski, D. P.: On the Resistance of Spheres and Ellipsoids in Wind Tunnels. TN 44, Jan. 1921.
- Toussaint, A.: Note on the Resistance of Polished Cylinders (and Cylindrical Wires) with Generatrices Perpendicular to the Airstream. TN 43, Feb. 1921.
- Tuckerman, L. B.: Notes on Aerodynamic Forces on Airship Hulls. TN 129, March 1923.
- Munk, Max M.: The Aerodynamic Forces on Airship Hulls. Rept. 184, 1924.
- Hirsch, P.: Motion of Spheres in Still Fluids. TM 257, April 1924.
- Munk, Max M.: Note on the Pressure Distribution over the Hull of Elongated Airships with Circular Cross Section. TN 192, May 1924.
- Burgess, C. P.: A Method of Determining the Dimensions and Horsepower of an Airship for Any Given Performance. TN 194, May 1924.
- Munk, Max M.: Remarks on the Pressure Distribution over the Surface of an Ellipsoid, Moving Translationally Through a Perfect Fluid. TN 196, June 1924.
- Wieselsberger, C.: Air Forces Exerted on Streamlined Bodies with Round or Square Cross-Sections, When Placed Obliquely to the Airstream. TM 267, June 1924.
- Munk, Max M.: The Simplifying Assumptions, Reducing the Strict Application of Classical Hydrodynamics to Practical Aeronautical Computations. TN 207, Nov. 1924.
- Reid, Elliott G.: Tests of Rotating Cylinders. TN 209, Dec. 1924.
- Ames, Joseph S.: A Resume of the Advances in Theoretical Aeronautics Made by Max M. Munk, Rept. 213, 1925.
- Betz, A.: The "Magnus Effect," the Prin ciple of the Flettner Rotor. TM 310, April 1925.
- Dryden, H. L. and Heald, R. H.: Investigation of Turbulence in Wind Tunnels by a Study of the Flow About Cylinders. Rept. 231, 1926.
- Castleman, R. A.: The Resistance to the Steady Motion of Small Spheres in Fluids. TN 231, Feb. 1926.

- Schrenk, Oskar: Experiments with a Sphere from Which the Boundary Layer is Removed by Suction. TM 388, Nov. 1926.
- Zahm, A. F.: Flow and Drag Formulas for Simple Quadrics. Rept. 253, 1927.
- Flachsbart, O.: Recent Researches on the Air Resistance of Spheres. TM 475, Aug. 1928.
- Troller, Theodor: Influence of Fuselage on Propeller Design. TM 492, Dec. 1928.
- Smith, R. H.: Aerodynamic Theory and Test of Strut Forms. Rept. 311, 1929.
- Zahm, A. F.: Flow and Force Equations for a Body Revolving in a Fluid. Rept. 323, 1929.
- Jacobs, Eastman N.: Sphere Drag Tests in the Variable Density Wind Tunnel. TN 312, Aug. 1929.
- Ahlborn, F.: The Magnus Effect in Theory and in Reality. TM 567, May 1930.
- Von Kármán, Théodor: Calculation of Pressure Distribution on Airship Hulls. TM 574, July 1930.
- Freeman, Hugh B.: Measurements of Flow in the Boundary Layer of a 1/40-Scale Model of the U. S. Airship "Akron." Rept. 430, 1932.
- Ahlborn, Fr.: Turbulence and Mechanism of Resistance on Spheres and Cylinders. TM 653, Jan. 1932.
- Lotz, I.: Calculation of Potential Flow Past Airship Bodies in Yaw. TM 675, July 1932.
- Vladea, Jon: Effect of Fuselage and Engine Nacelles on Some Aerodynamic Properties of an Airplane Wing. TM 736, Feb. 1934.
- Schubauer, G. B.: Air Flow in a Separating Laminar Boundary Layer. Rept. 527, 1935.
- Kaplan, Carl: Circular Motion of Bodies of Revolution. TN 554, Feb. 1936.
- Dryden, Hugh L.; Schubauer, G. B.; Mock, W. C., Jr. and Skramstad, H. K.: Measurements of Intensity and Scale of Wind-Tunnel Turbulence and Their Relation to the Critical Reynolds Number of Spheres. Rept. 581, 1937.
- Robinson, Russell G. and Wright, Ray H.: Estimation of Critical Speeds of Airfoils and Streamline Bodies. ACR (WR L-781), March 1940.

Theory (Cont.)

- Kaplan, Carl: The Flow of a Compressible Fluid Past a Sphere. TN 762, May 1940.
- Kaplan, Carl: On a New Method for Calculating the Potential Flow Past a Body of Revolution. Rept. 752, 1942.
- Pretsch, J.: The Stability of Laminar Flow Past a Sphere. TM 1017, June 1942.
- Brown, Clinton E. and Parker, Hermon M.: A Method for the Calculation of External Lift, Moment, and Pressure Drag of Slender Open-Nose Bodies of Revolution at Supersonic Speeds. Rept. 808, 1945.
- Bergman, Stefan: Graphical and Analytical Methods for the Determination of a Flow of a Compressible Fluid Around an Obstacle. TN 973, July 1945.
- Ferri, Antonio: Supersonic-Tunnel Tests of Projectiles in Germany and Italy. ACR L5H08 (WR L-152), Oct. 1945.
- Katzoff, S. and Finn, Robert S.: Effects of External Fuel Tanks and Bombs on Critical Speeds of Aircraft. CB L5H27 (WR L-726), Feb. 1946.
- Jones, Robert T. and Margolis, Kenneth: Flow over a Slender Body of Revolution at Supersonic Velocities. TN 1081, Aug. 1946.
- Wood, George P.: Calculation of Surface Temperatures in Steady Supersonic Flight. TN 1114, Dec. 1946.
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.
- Kaplan, Carl: Effect of Compressibility at High Subsonic Velocities on the Moment Acting on an Elliptic Cylinder. TN 1218, March 1947.
- Laitone, Edmund V. and Pardee, Otway O'M.: Location of Detached Shock Wave in Front of a Body Moving at Supersonic Speeds. RM A7B10, May 1947.
- Herriot, John G.: The Linear Perturbation
 Theory of Axially Symmetric Compressible Flow with Application to the
 Effect of Compressibility on the Pressure Coefficient at the Surface of a
 Body of Revolution. RM A6H19, July
 1947.
- Bilharz, Herbert and Holder, Ernst: Calculation of the Pressure Distribution on Bodies of Revolution in the Subsonic Flow of a Gas; Part I - Axially Symmetrical Flow. TM 1153, July 1947.

- Ivey, H. Reese; Klunker, E. Bernard and Bowen, Edward N.: A Method for Determining the Aerodynamic Characteristics of Two- and Three-Dimensional Shapes at Hypersonic Speeds. TN 1613, July 1948.
- Maslen, Stephen H.: Method for Calculation of Pressure Distributions on Thin Conical Bodies of Arbitrary Cross Section in Supersonic Stream. TN 1659, July 1948.
- Spreiter, John R.: Aerodynamic Properties of Slender Wing-Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1662, July 1948.
- Ivey, H. Reese and Morrissette, Robert R.:
 An Approximate Determination of the
 Lift of Slender Cylindrical Bodies and
 Wing-Body Combinations at Very High
 Supersonic Speeds. TN 1740, Oct.
 1948.
- Thompson, Jim Rogers: A Rapid Graphical Method for Computing the Pressure Distribution at Supersonic Speeds on a Slender Arbitrary Body of Revolution. TN 1768, Jan. 1949.
- Ferri, Antonio: Method for Evaluating from Shadow or Schlieren Photographs the Pressure Drag in Two-Dimensional or Axially Symmetrical Flow Phenomena with Detached Shock. TN 1808, Feb. 1949.
- Ferri, Antonio: The Method of Characteristics for the Determination of Supersonic Flow over Bodies of Revolution at Small Angles of Attack. TN 1809, Feb. 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Schmieden, C. and Kawalki, K. H.: Contribution to the Problem of Flow at High Speed. TM 1233, June 1949.
- Spreiter, John R.: Aerodynamic Properties of Cruciform-Wing and Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1897, June 1949.
- Moeckel, W. E.: Approximate Method for Predicting Form and Location of Detached Shock Waves Ahead of Plane or Axially Symmetric Bodies. TN 1921, July 1949.
- Nielsen, Jack N. and Matteson, Frederick H.: Calculative Method for Estimating the Interference Pressure Field at Zero Lift on a Symmetrical Swept-Back Wing Mounted on a Circular Cylindrical Body. RM A9E19, Aug. 1949.

SHAPE VARIABLES

(1.3.2)

- Riabouchinski, D. P.: On the Resistance of Spheres and Ellipsoids in Wind Tunnels. TN 44, Jan. 1921.
- Toussaint, A.: Note on the Resistance of Polished Cylinders (and Cylindrical Wires) with Generatrices Perpendicular to the Airstream. TN 43, Feb. 1921.
- Zahm, A. F.; Smith, R. H. and Hill, G. C.: Point Drag and Total Drag of Navy Struts No. 1 Modified. Rept. 137, 1922.
- Toussaint, A.: Lecture on Aerodynamics. TM 227, Sept. 1923.
- Munk, Max M.: The Aerodynamic Forces on Airship Hulls. Rept. 184, 1924.
- Betz, A.: Velocity and Pressure Distribution Behind Bodies in an Air Current. TM 268, July 1924.
- Diehl, Walter S.: Tests on Airplane Fuselages, Floats and Hulls. Rept. 236, 1926.
- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine --1. Rept. 313, 1929.
- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine --II. Rept. 314, 1929.
- Muttray, H.: Investigation of the Effect of the Fuselage on the Wing of a Low-Wing Monoplane. TM 517, June 1929.
- Wood, Donald H.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. II -Thick Wing - Various Radial-Engine Cowlings - Tractor Propeller. Rept. 436, 1932.
- Jacobs, Eastman N.: The Drag of Streamline Wires. TN 480, Dec. 1933.
- Biermann, David and Herrnstein, William H., Jr.: The Drag of Airplane Wheels, Wheel Fairings and Landing Gears. II - Nonretractable and Partly Retractable Landing Gears. Rept. 518, 1935.
- Stickle, George W.; Crigler, John L. and Naiman, Irven: The Effect of Streamlining the Afterbody of an NACA Cowling. ACR (WR L-279), Dec. 1939.

- Stickle, George W.; Crigler, John L. and Naiman, Irven: Effect of Body Nose Shape on the Propulsive Efficiency of a Propeller. Rept. 725, 1941.
- Czarnecki, K. R. and Guryansky, Eugene R.: Tests of Wing Machine-Gun and Cannon Installations in the NACA Full-Scale Wind Tunnel. ACR, Aug. 1941.
- Kaplan, Carl: On a New Method for Calculating the Potential Flow Past a Body of Revolution. Rept. 752, 1942.
- Delano, James B. and Wright, Ray H.: Investigation of Drag and Pressure Distribution of Windshields at High Speeds. ARR (WR L-462), Jan. 1942.
- Becker, John V.: High-Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.
- Donlan, C. J. and Letko, W.: The Effect of Cowling Shape on the Stability Characteristics of an Airplane. ARR (WR L-343), Sept. 1942.
- Mattson, Axel T.: Tests of a Large Spherical Turret and a Modified Turret on a Typical Bomber Fuselage. ARR (WR L-463), Oct. 1942.
- Erickson, Albert L.: Investigation of Diving Moments of a Pursuit Airplane in the Ames 16-Foot High-Speed Wind Tunnel. MR (WR A-65), Oct. 1942.
- Becker, John V. and Mattson, Axel T.: The Effect of Spinner-Body Gap on the Pressures Available for Cooling in the NACA E-Type Cowling. CB (WR L-497), March 1943.
- Erickson, Albert L.: Wind-Tunnel Investigation of Devices for Improving the Diving Characteristics of Airplanes. CMR 3F12 (WR A-66), April 1943.
- Ritchie, Virgil S. and Daniels, Everett J.:
 Estimation of Pressure Distributions
 at Subcritical Speeds for Turrets Located on a Wing. ACR L4G28 (WR
 L-117), July 1944.
- Ferri, Antonio: Supersonic-Tunnel Tests of Projectiles in Germany and Italy. ACR L5H08 (WR L-152), Oct. 1945.
- Johnston, J. Ford; Klawans, Bernard B. and Danforth, Edward C. B., III: Flight Investigation of Factors Affecting the Carburetor Ram and Nacelle Drag of an A-26B Airplane. MR L6F21 (WR L-740), July 1946.

Shape Variables (Cont.)

- Boswinkle, Robert W., Jr. and Bryant, Rosemary P.: An Experimental Investigation of Flow Conditions in the Vicinity of an NACA DS-Type Cowling. MR L6H14 (WR L-747), Aug. 1946.
- Busemann, Adolf: Infinitesimal Conical Supersonic Flow. TM 1100, March 1947.
- Kuhn, Richard E. and Polhamus, Edward C.: Wind-Tunnel Investigation of Bomb-Bay Configurations Intended to Minimize the Tumbling of Light-Weight Bombs. RM L7D11, June 1947.
- Thompson, Jim Rogers: A Rapid Graphical Method for Computing the Pressure Distribution at Supersonic Speeds on a Slender Arbitrary Body of Revolution. TN 1768, Jan. 1949.

FINENESS RATIO (1.3.2.1)

- Zahm, A. F.; Smith, R. H. and Hill, G. C.: The Drag of C Class Airship Hull with Varying Length of Cylindric Midships. Rept. 138, 1921.
- Warner, Edward P.: Wind Tunnel Tests of Five Strut Sections in Yaw. TN 167, Nov. 1923.
- Higgins, George J.: Tests of the N.P.L. Airship Models in the Variable Density Wind Tunnel. TN 264, Sept. 1927.
- Zahm, A. F.; Smith, R. H. and Louden, F. A.: Drag of C-Class Airship Hulls of Various Fineness Ratios. Rept. 291, 1928.
- Abbott, Ira H.: Airship Model Tests in the Variable Density Wind Tunnel. Rept. 394, 1931.
- Upson, Ralph H. and Klikoff, W. A.: Application of Practical Hydrodynamics to Airship Design. Rept. 405, 1931.
- Abbott, I. H.: Fuselage-Drag Tests in the Variable-Density Wind Tunnel Simulating Streamline Bodies of Revolution, Fineness Ratio of 5. TN 614, Sept. 1937.
- Delano, James B. and Wright, Ray H.: Investigation of Drag and Pressure Distribution of Windshields at High Speeds. ARR (WR L-462), Jan. 1942.
- Pepper, Edward: Wind-Tunnel Tests of Several Arrangements of External Auxiliary Fuel Tanks on a Fighter-Type Airplane. ACR (WR L-371), Aug. 1942.

- Hanson, Frederick H., Jr.: The Effect of a Wing-Tip-Mounted Fuel Tank on the Aerodynamic Characteristics of a High-Speed Bomber Wing. ACR A5H06, Oct. 1945.
- Thompson, Jim Rogers and Mathews, Charles W.: Total Drag of a Body of Fineness Ratio 12 and Its Stabilizing Tail Surfaces Measured During Free Fall at Transonic Speeds. CB L6D08, April 1946.
- Jones, Robert T. and Margolis, Kenneth: Flow over a Slender Body of Revolution at Supersonic Velocities. TN 1081, Aug. 1946.
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.
- Yates, Campbell C. and Riebe, John M.: Effect of Length-Beam Ratio on the Aerodynamic Characteristics of Flying-Boat Hulls. TN 1305, June 1947.
- Riebe, John M. and Naeseth, Rodger L.: Effect of Aerodynamic Refinement on the Aerodynamic Characteristics of a Flying-Boat Hull. TN 1307, June 1947.
- Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.
- Lowry, John G. and Riebe, John M.: Effect of Length-Beam Ratio on Aerodynamic Characteristics of Flying-Boat Hulls Without Wing Interference. TN 1686, Sept. 1948.
- Lange, G.: Force- and Pressure-Distribution Measurements on Eight Fuselages. TM 1194, Oct. 1948.
- Thompson, Jim Rogers: A Rapid Graphical Method for Computing the Pressure Distribution at Supersonic Speeds on a Slender Arbitrary Body of Revolution. TN 1768, Jan. 1949.

CROSS SECTION (1.3.2.2)

- Bateman, H.: The Inertia Coefficients of an Airship in a Frictionless Fluid. Rept. 164, 1923.
- Warner, Edward P.: Wind Tunnel Tests of Five Strut Sections in Yaw. TN 167, Nov. 1923.
- Smith, R. H.: Aerodynamic Theory and Test of Strut Forms - II. Rept. 335, 1929.

- Cross Section Shape Variables (Cont.)
- Abbott, I. H.: Fuselage-Drag Tests in the Variable-Density Wind Tunnel Simulating Streamline Bodies of Revolution, Fineness Ratio of 5. TN 614, Sept. 1937.
- Harmon, Hubert N.: Wind-Tunnel Tests of Several Model Tractor-Propeller and Pusher-Propeller Wing Extension-Shaft Arrangements. ACR, June 1941.
- Delano, James B. and Wright, Ray H.: Investigation of Drag and Pressure Distribution of Windshields at High Speeds. ARR (WR L-462), Jan. 1942.
- Pepper, Edward: Wind-Tunnel Tests of Several Arrangements of External Auxiliary Fuel Tanks on a Fighter-Type Airplane. ACR (WR L-371), Aug. 1942.
- Feigenbaum, D.: Estimation of the Performance and Longitudinal Stability and Control of a Lifting-Body Type of Cargo Airplane from Tests of Simplified Models. MR L5E09a (WR L-541), June 1945.
- Stamm, G.: Investigations of Pressure Distribution on Fast Flying Bodies. TM 1101, Sept. 1946.
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.
- Maslen, Stephen H.: Method for Calculation of Pressure Distributions on Thin Conical Bodies of Arbitrary Cross Section in Supersonic Stream. TN 1659, July 1948.
- Lowry, John G. and Riebe, John M.: Effect of Length-Beam Ratio on Aerodynamic Characteristics of Flying-Boat Hulls Without Wing Interference. TN 1686, Sept. 1948.

THICKNESS DISTRIBUTION (1.3.2.3)

- Zahm, A. F.; Smith, R. H. and Hill, G. C.: The Drag of C Class Airship Hull with Varying Length of Cylindric Midships. Rept. 138, 1921.
- Warner, Edward P.: Wind Tunnel Tests of Five Strut Sections in Yaw. TN 167, Nov. 1923.
- Gough, Melvin N.: Effect of the Angular Position of the Section of a Ring Cowling on the High Speed of an XF7C-1 Airplane. TN 355, Nov. 1930.
- Abbott, Ira H.: Fuselage-Drag Tests in the Variable-Density Wind Tunnel: Streamline Bodies of Revolution, Fineness Ratio of 5. TN 614, Sept. 1937.

- Allen, H. J. and Frick, Charles W.: Experimental Investigation of a New Type of Low-Drag Wing-Nacelle Combination. ACR, July 1942.
- Jones, Robert T. and Margolis, Kenneth: Flow over a Slender Body of Revolution at Supersonic Velocities. TN 1081, Aug. 1946.
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.
- Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.
- Lange, G.: Force- and Pressure-Distribution Measurements on Eight Fuselages. TM 1194, Oct. 1948.
- Thompson, Jim Rogers: A Rapid Graphical Method for Computing the Pressure Distribution at Supersonic Speeds on a Slender Arbitrary Body of Revolution. TN 1768, Jan. 1949.
- Kempf, Günther: Moments of Cambered Round Bodies. TM 1227, Aug. 1949.

SURFACE CONDITIONS (1.3.2.4)

- Zahm, A. F.: Influence of Model Surface and Air Flow Texture on Resistance of Aerodynamic Bodies. Rept. 139, 1922.
- Abbott, Ira H.: Airship Model Tests in the Variable Density Wind Tunnel. Rept. 394, 1931.
- Upson, Ralph H. and Klikoff, W. A.: Application of Practical Hydrodynamics to Airship Design. Rept. 405, 1931.
- Turner, Philip S.; Doran, Jewel and Reinhart, Frank W.: Fairing Compositions for Aircraft Surfaces. TN 958, Nov. 1944.
- Czarnecki, K. R. and Pasamanick, Jerome:
 Langley Full-Scale-Tunnel Investigation of the Fuselage Boundary Layer on a Typical Fighter Airplane with a Single Liquid-Cooled Engine. TN 1087, June 1946.
- Kohl, Robert C. and Diggs, Donald R.: Effect of Various Methods of Boundary-Layer Control on Performance of V-1710-93 Engine-Stage Supercharger. RM E6L19, Jan. 1947.
- Hall, Charles F. and Fitzgerald, Fred F.:
 An Approximate Method for Calculating
 the Effect of Surface Roughness on the
 Drag of an Airplane. RM A7B24, March
 1947.

- Surface Conditions Shape Variables (Cont.)
- Maslen, Stephen H.: Method for Calculation of Pressure Distributions on Thin Conical Bodies of Arbitrary Cross Section in Supersonic Stream. TN 1659, July 1948.

PROTUBERANCES (1.3.2.5)

- Heidelberg, V.: Influence of Struts and Stays on the Speed of an Airplane. TM 46, Oct. 1921.
- Warner, Edward P.: Wind Tunnel Tests of Fuselages and Windshields. TN 226, Sept. 1925.
- Jacobs, Eastman N.: Effect of Protruding Gasoline Tanks upon the Characteristics of an Airfoil. TN 249, Oct. 1926.
- Wood, Donald H.: Drag of Exposed Fittings and Surface Irregularities on Airplane Fuselages. TN 280, March 1928.
- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Engine in a Cabin Fuselage. TN 301, Nov. 1928.
- Weick, Fred E.: Full Scale Investigation of the Drag of a Wing Radiator. TN 318, Sept. 1929.
- Jacobs, Eastman N.: The Drag and Interference of a Nacelle in the Presence of a Wing. TN 320, Oct. 1929.
- Abbott, Ira H.: Airship Model Tests in the Variable Density Wind Tunnel. Rept. 394, 1931.
- Ward, Kenneth E.: The Interference Effects on an Airfoil of a Flat Plate at Midspan Position. TN 403, Dec. 1931.
- Freeman, Hugh B.: Force Measurements on a 1/40-Scale Model of the U.S. Airship "Akron." Rept. 432, 1932.
- Abbott, Ira H.: The Drag of Two Streamline Bodies as Affected by Protuberances and Appendages. Rept. 451, 1932.
- Windler, Ray: Drag Tests of 4/9-Scale Model Engine Nacelles with Various Cowlings. TN 432, Oct. 1932.
- DeFrance, Smith J.: The Aerodynamic Effect of a Retractable Landing Gear. TN 456, March 1933.
- Jacobs, Eastman N.: The Reduction in Drag of a Forward-Sloping Windshield. TN 481, Dec. 1933.

- Dearborn, C. H.: Full-Scale Drag Tests of Landing Lamps. TN 497, May 1934.
- DeFrance, S. J.: Drag of Prestone and Oil Radiators on the YO-31A Airplane. TN 549, Dec. 1935.
- Harmon, Hubert N.: Drag Determinations of the Forward Component of a Tricycle Landing Gear. TN 788, Dec. 1940.
- Naiman, Irven and Hill, Paul R.: The Effect of External Shape upon the Drag of a Scoop. ACR (WR L-331), July 1941.
- Luoma, Arvo A.: Drag Measurements of a Protruding 0.50-Caliber Machine Gun. ACR (WR L-348), July 1941.
- Nissen, J. M. and White, M. D.: Flight Investigation of Wing-Gun Fairings on a Fighter Type Airplane. ACR (WR L-247), Oct. 1941.
- Robinson, Russell G. and Delano, James B.: An Investigation of the Drag of Windshields in the 8-Foot High-Speed Wind Tunnel. Rept. 730, 1942.
- Becker, John V. and Leonard, Lloyd H.: High-Speed Tests of a Model Twin-Engine Low-Wing Transport Airplane. Rept. 750, 1942.
- Luoma, Arvo A.: Drag Measurements of a Protruding .50-Caliber Machine Gun with Barrel Jacket Removed. MR (WR L-581), Jan. 1943.
- Conway, Robert N. and Maynard, Julian D.: Wind-Tunnel Tests of Four Full-Scale Seaplane Floats. ARR 3G15 (WR L-238), July 1943.
- Wright, Ray H.: Estimation of Pressures on Cockpit Canopies, Gun Turrets, Blisters, and Similar Protuberances. ACR L4E10 (WR L-201), May 1944.
- Quinn, John H., Jr.: Summary of Data Relating to the Effects of Wing Machine-Gun and Cannon Installations on the Aerodynamic Characteristics of Airplanes. ACR L4L21 (WR L-158), Jan. 1945.
- Lange, Roy H.: A Summary of Drag Results from Recent Langley Full-Scale-Tunnel Tests of Army and Navy Airplanes. ACR L5A30 (WR L-108), Feb. 1945.
- Anderson, Joseph L. and Tkac, Victor B.: High-Speed Wind-Tunnel Tests of a Model of the North American XP-82 Airplane. MR A6D03 (WR A-75), April 1946.

CANOPIES

(1.3.3)

- Warner, Edward P.: Wind Tunnel Tests of Fuselages and Windshields. TN 226, Sept. 1925.
- Diehl, Walter S.: Tests on Airplane Fuselages, Floats and Hulls. Rept. 236, 1926.
- Jacobs, Eastman N.: The Reduction in Drag of a Forward-Sloping Windshield. TN 481, Dec. 1933.
- Clay, William C.: Improved Airplane Wind-Shields to Provide Vision in Stormy Weather. Rept. 498, 1934.
- Stack, John and Moberg, Richard J.: Drag of Several Gunner's Enclosures at High Speeds. ACR, July 1941.
- Robinson, Russell G. and Delano, James B.: An Investigation of the Drag of Windshields in the 8-Foot High-Speed Wind Tunnel. Rept. 730, 1942.
- Delano, James B. and Wright, Ray H.: Investigation of Drag and Pressure Distribution of Windshields at High Speeds. ARR (WR L-462), Jan. 1942.
- Erickson, Albert L.: Investigation of Diving Moments of a Pursuit Airplane in the Ames 16-Foot High-Speed Wind Tunnel. MR (WR A-65), Oct. 1942.
- Erickson, Albert L.: Wind-Tunnel Investigation of Devices for Improving the Diving Characteristics of Airplanes. MR 3F12 (WR A-66), April 1943.
- Bradley, Kathryn H. and Axilrod, B. M.: Plastic Mountings for Aircraft Windshields. TN 936, May 1944.
- Lange, Roy H.: A Summary of Drag Results from Recent Langley Full-Scale-Tunnel Tests of Army and Navy Airplanes. ACR L5A30 (WR L-108), Feb. 1945.
- MacLachlin, Robert and Levitt, Joseph: Wind-Tunnel Investigation of Effect of Canopies on Directional Stability Characteristics of a Single-Engine Airplane Model. TN 1052, May 1946.
- Danforth, Edward C. B., III and Reeder, John P.: Flight Measurements of Internal Cockpit Pressures in Several Fighter-Type Airplanes. TN 1173, Feb. 1947.
- Cocke, Bennie W., Jr. and Czarnecki, K. R.: Canopy Loads Investigation for the F6F-3 Airplane. RM L6L23a, April 1947.

- Gale, Lawrence J.: Effect of Landing Flaps and Landing Gear on the Spin and Recovery Characteristics of Airplanes. TN 1643, June 1948.
- Matheny, Cloyce E. and Huston, Wilber B.:
 Flight Investigation of Loads on a
 Bubble-Type Canopy. RM L8C30,
 Oct. 1948.

DUCTED BODIES

(1.3.4)

- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine--I. Rept. 313, 1929.
- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine--II. Rept. 314, 1929.
- DeFrance, Smith J.: Results of Drag Tests on P3M-1 Nacelle. ACR, April 1932.
- Stipa, Luigi: Stipa Monoplane with Venturi Fuselage. TM 753, Sept. 1934.
- Schubauer, G. B.: Air Flow in a Separating Laminar Boundary Layer. Rept. 527, 1935.
- Rubert, Kennedy F. and Knopf, George S.:
 A Method for the Design of Cooling
 Systems for Aircraft Power-Plant
 Installations. ARR (WR L-491),
 March 1942.
- Silverstein, Abe and Kinghorn, George F.: Improved Baffle Design for Air-Cooled Engine Cylinders. ARR 3H16 (WR L-767), March 1943.
- Migotsky, Eugene: Investigation for the Development of a High-Speed Antiair-craft Tow Target. MR (WR L-760), July 1943.
- Schey, Oscar W.; Rollin, Vern G. and Buckner, Howard A., Jr.: Comparative Cooling of Cylinders of Nonuniform Fin Width with Tight-Fitting Baffles and with Baffles That Provide Constant Flow-Path Areas. ARR E4D21 (WR E-85), April 1944.
- McHugh, James G. and Pepper, Edward:
 The Propeller and Cooling-Air-Flow
 Characteristics of a Twin-Engine Airplane Model Equipped with NACA DsType Cowlings and with Propellers of
 NACA 16-Series Airfoil Sections.
 ACR L4I20 (WR L-638), Sept. 1944.

Ducted Rodies (Cont.)

- Conway, Robert N. and Emmons, M. Arnold, Jr.: An Investigation of the Ranger V-770-8 Engine Installation for the EDO XOSE-1 Airplane. I Cooling TED No. NACA 144. MR L5I12 (WR L-561), Oct. 1945.
- Nichols, Mark R. and Dennard, John S.: An Investigation of the Ranger V-700-8 Engine Installation for the Edo Xose-I Airplane. II Aerodynamics (TED No. NACA 044). MR L5I12b (WR L-562), Oct. 1945.
- Brown, Clinton E. and Parker, Hermon M.:
 A Method for the Calculation of External
 Lift, Moment, and Pressure Drag of
 Slender Open-Nose Bodies of Revolution at Supersonic Speeds. Rept. 808,
 1945.
- Brown, Clinton E.: Internal and External Aerodynamics of Ducted Bodies, at Supersonic Speeds. CB L6B26 (WR L-728), April 1946.
- Oswatitsch, Kl.: Pressure Recovery for Missiles with Reaction Propulsion at High Supersonic Speeds (The Efficiency of Shock Diffusers). TM 1140, June 1947.
- Platt, Robert J., Jr.: Static Tests of a Shrouded and an Unshrouded Propeller. RM L7H25, Feb. 1948.
- Regenscheit, B.: Venturi Tube with Varying Mass Flow. TM 1191, March 1948.
- Mirels, Harold: Theoretical Wave Drag and Lift of Thin Supersonic Ring Airfoils. TN 1678, Aug. 1948.
- Moeckel, W. E.: Approximate Method for Predicting Form and Location of Detached Shock Waves Ahead of Plane or Axially Symmetric Bodies. TN 1921, July 1949.

NOSE SHAPE (1.3.4.1)

- Stickle, George W.; Crigler, John L. and Naiman, Irven: The Effect of Streamlining the Afterbody of an NACA Cowling. ACR (WR L-279), Dec. 1939.
- Becker, John V. and Baals, Donald D.: Wind Tunnel Tests of a Submerged-Engine Fuselage Design. ACR (WR L-485), Oct. 1940.
- Harmon, Hubert N.: Wind-Tunnel Tests of Several Model Tractor-Propeller and Pusher-Propeller Wing Extension-Shaft Arrangements. ACR, June 1941.
- Robinson, Russell G. and Becker, John V.: High-Speed Tests of Conventional Radial-Engine Cowlings. Rept. 745, 1942.

- Bailey, F. J., Jr.; Johnston, J. Ford and Voglewede, T. J.: Flight Investigation of the Performance and Cooling Characteristics of a Long-Nose High-Inlet-Velocity Cowling on the XP-42 Airplane. ARR (WR L-356), April 1942.
- Becker, John V. and Baals, Donald D.: High-Speed Tests of a Ducted Body with Various Air-Outlet Openings. ACR (WR L-486), May 1942.
- Molloy, Richard C. and Brewster, James H., III: New Research on the Cowling and Cooling of Radial Engines. ARR, May 1942.
- Johnston, J. Ford: Review of Flight Tests of NACA C and D Cowlings on the XP-42 Airplane. Rept. 771, 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. II Low-Inlet-Velocity Cowling with Axial-Flow Fan and Propeller Cuffs. ARR (WR L-243), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. IV High-Inlet-Velocity Cowling Tested in Climb with and without Propeller Cuffs and in High-Speed Level Flight without Propeller Cuffs. ARR (WR L-285), Jan. 1943.
- Bailey, F. J., Jr. and Johnston, J. Ford:
 Flight Investigation of NACA DS Cowlings on the XP-42 Airplane. I High-Inlet-Velocity Cowling with Propeller Cuffs Tested in High-Speed Level Flight. ARR (WR L-383), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane III Low-Inlet-Velocity Cowling without Fan or Propeller Cuffs, with Axial-Flow Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR (WR L-508), Jan. 1943.
- Quinn, John H., Jr.: Some Lift and Drag Measurements of Two Configurations of a Nacelle and Oil-Cooler Scoop for the Hughes-Kaiser Cargo Airplane. MR (WR L-748), Sept. 1943.
- Allen, H. Julian; Frick, Charles W. and Erickson, Myles D.: An Experimental Investigation of Several Low-Drag Wing Nacelle Combinations with Internal Air Flow. ACR 5A15, March 1945.
- Kuenzig, John K. and Palter, Herman: Aerodynamics of the Carburetor Air Scoop and the Engine Cowling of the XTB2D-1 Airplane. MR E6E27 (WR E-280), June 1946.

- Nose Shape Ducted Bodies (Cont.)
- Nichols, Mark R. and Keith, Arvid L., Jr.: Investigation of a Systematic Group of NACA 1-Series Cowlings with and without Spinners. RM L8A15, May 1948.
- Boswinkle, Robert W., Jr.: Air-Flow Surveys in the Vicinity of Representative NACA 1-Series Cowlings. RM L8A15a, May 1948.
- Ferri, Antonio: Method for Evaluating from Shadow or Schlieren Photographs the Pressure Drag in Two-Dimensional or Axially Symmetrical Flow Phenomena with Detached Shock. TN 1808, Feb. 1949.
- Ferri, Antonio: The Method of Characteristics for the Determination of Supersonic Flow over Bodies of Revolution at Small Angles of Attack. TN 1809, Feb. 1949.

TAIL SHAPE (1.3.4.2)

- Stickle, George W.; Crigler, John L. and Naiman, Irven: The Effect of Streamlining the Afterbody of an NACA Cowling. ACR (WR L-279), Dec. 1939.
- Becker, John V. and Baals, Donald D.: Wind Tunnel Tests of a Submerged-Engine Fuselage Design. ACR (WR L-458), Oct. 1940.
- Becker, John V. and Baals, Donald D.: High-Speed Tests of a Ducted Body with Various Air-Outlet Openings. ACR (WR L-486), May 1942.

SIDE INLETS (1.3.4.3)

- Smith, Norman F. and Baals, Donald D.: Wind-Tunnel Investigation of a High-Critical-Speed Fuselage Scoop Including the Effects of Boundary Layer. ACR L5B01a (WR L-733), Feb. 1945.
- Frick, Charles W.; Davis, Wallace F.; Randall, Lauros and Mossman, Emmet A.: An Experimental Investigation of NACA Submerged Duct Entrances. ACR A5I20, Oct. 1945.

SIDE EXITS (1.3.4.4)

- Becker, John V. and Baals, Donald D.: Wind Tunnel Tests of a Submerged-Engine Fuselage Design. ACR (WR L-485), Oct. 1940.
- Molloy, Richard C. and Brewster, James H., III: New Research on the Cowling and Cooling of Radial Engines: ARR, May 1942.

Lange, Roy H.: A Summary of Drag Results from Recent Langley Full-Scale-Tunnel Tests of Army and Navy Airplanes. ACR L5A30 (WR L-108), Feb. 1945.

HULLS

(1.3.5)

- Munk, Max M.: The Choice of the Speed of an Airship. TN 89, March 1922.
- Munk, Max M.: Notes on Aerodynamic Forces - I. Rectilinear Motion. TN 104, July 1922.
- Munk, Max M.: Notes on Aerodynamic Forces - II. Curvilinear Motion. TN 105, July 1922.
- Munk, Max M.: Notes on Aerodynamic Forces - III. The Aerodynamic Forces on Airships. TN 106, July 1922.
- Diehl, Walter S.: Tests on Airplane Fuselages, Floats and Hulls. Rept. 236, 1926.
- Hartman, Edwin P.: The Aerodynamic Drag of Flying-Boat Hull Models as Measured in the NACA 20-Foot Wind Tunnel - I. TN 525, April 1935.
- Kaplan, Carl: Circular Motion of Bodies of Revolution. TN 554, Feb. 1936.
- Parkinson, J. B. and House, R.O.: Hydrodynamic and Aerodynamic Tests of Models of Floats for Single-Float Seaplanes - NACA Models 41-D, 41-E, 61-A, 73, and 73-A. TN 656, July 1938.
- Truscott, Starr; Parkinson, J. B.; Ebert, John W., Jr. and Valentine, E. Floyd; Hydrodynamic and Aerodynamic Tests of Models of Flying-Boat Hulls Designed for Low Aerodynamic Drag NACA Models 74, 74-A and 75. TN 668, Oct. 1938.
- Dawson, John R. and Hartman, Edwin P.: Hydrodynamic and Aerodynamic Tests of Four Models of Outboard Floats (NACA Models 51-A, 51-B, 51-C, and 51-D). TN 678, Dec. 1938.
- House, R. O.: The Aerodynamic Drag of Five Models of Side Floats NACA Models 51-E, 51-F, 51-G, 51-H, and 51-J. TN 680, Dec. 1938.
- Silverstein, Abe: Experiments on the Recovery of Waste Heat in Cooling Ducts. ACR, May 1939.
- Parkinson, John B.; Olson, Roland E. and House, Rufus O.: Hydrodynamic and Aerodynamic Tests of a Family of Models of Seaplane Floats with Varying Angles of Dead Rise NACA Models 57-A, 57-B, and 57-C. TN 716, July 1939.

Hulls (Cont.)

- Liddell, Robert B.: The Aerodynamic Tests of Three Edo Floats for the SB2U-3, OS2U-2, and XSB2C-2 Seaplanes - NACA Models 106-K, 107-K, and 125-AH. MR (WR L-722), March 1942.
- Parkinson, John B.; Olson, Roland E.; Draley, Eugene C. and Luoma, Arvo A.: Aerodynamic and Hydrodynamic Tests of a Family of Models of Flying-Boat Hulls Derived from a Streamlined Body NACA Model 84 Series. Rept. 766, 1943.
- Nelson, William J. and Ebert, John W., Jr.: An Investigation of the Air Flow Around a Martin PBM-3 Flying Boat by Means of Tufts. MR (WR L-674), April 1943.
- Fullmer, Felicien F., Jr.: Tests of a 1/40-Scale Wing-Hull Model and a 1/10-Scale Float-Strut Model of the Hughes-Kaiser Cargo Airplane in the Two-Dimensional Low-Turbulence Pressure Tunnel. MR (WR L-633), Sept. 1943.
- Benson, James M. and Lina, Lindsay J.: The Use of a Retractable Planing Flap Instead of a Fixed Step on a Seaplane. ARR 3E31 (WR L-237), May 1943.
- Conway, Robert N. and Maynard, Julian D.: Wind-Tunnel Tests of Four Full-Scale Seaplane Floats. ARR 3G15 (WR L-238), July 1943.

- Parkinson, John B.: The Design of the Optimum Hull for a Large Long-Range Flying Boat. ARR L4I12 (WR L-282), Sept. 1944.
- Benson, James M. and Bidwell, Jerold M.:
 Bibliography and Review of Information
 Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept.
 1945.
- Yates, Campbell C. and Riebe, John M.: Aerodynamic Characteristics of Three Planing-Tail Flying-Boat Hulls. TN 1306, June 1947.
- Fullmer, Felicien F., Jr.: Wind-Tunnel Investigation of a Systematic Series of Modifications to a Flying-Boat Hull. TN 1576, May 1948.
- Lowry, John G. and Riebe, John M.: Effect of Length-Beam Ratio on Aerodynamic Characteristics of Flying-Boat Hulls without Wing Interference. TN 1686, Sept. 1948.
- MacLeod, Richard G.: Aerodynamic Characteristics of a Flying-Boat Hull Having a Length-Beam Ratio of 15 and a Warped Forebody. RM L9A03, Feb. 1949.

Internal Aerodynamics (1.4)

- Wieselsberger, C.: Experiments with a Built-In or Fuselage Radiator. TN 141, May 1923.
- Peters, H.: Conversion of Energy in Cross-Sectional Divergences Under Different Conditions of Inflow. TM 737, March 1934.
- Weise, A.: The Conversion of Energy in a Radiator. TM 869, July 1938.
- Waldron, C. D.: Pressure Drop in Tank and Float Vent Tubes on Diving Airplanes. ACR (WR E-114), Jan. 1939.
- Barth, W.: Theoretical and Experimental Investigations of the Drag of Installed Aircraft Radiators. TM 932, Feb. 1940.
- Rogallo, F. M.: Internal-Flow Systems for Aircraft. Rept. 713, 1941.
- Eckert, B. and Pfluger, F.: The Resistance Coefficient of Commerical Round Wire Grids. TM 1003, Jan. 1942.
- Brevoort, M. J. and Tifford, A. N.: An Experimental Investigation of Flow Across Tube Banks. ARR (WR L-232), March 1942.
- Czarnecki, K. R.: Pressure-Drop Characteristics of Orifice Plates used to Simulate Radiators. ARR (WR L-342), March 1942.
- Joyner, Upshur T. and Palmer, Carl B.:
 An Experimental Survey of Flow Across
 Banks of Elliptical and Pointed Tubes.
 ARR (WR L-609), Jan. 1943.
- Wood, George P. and Brevoort, Maurice J.: Design, Selection, and Installation of Aircraft Heat Exchangers. ARR 3G31 (WR L-341), July 1943.
- Silverstein, Abe and Kinghorn, George F.: Improved Baffle Design for Air-Cooled Engine Cylinders. ARR 3H16 (WR L-767), Aug. 1943.
- Kantrowitz, Arthur and Huber, Paul W.: Heat-Capacity Lag in Turbine-Working Fluids. ARR L4E29 (WR L-21), May 1944.
- Hillendahl, Wesley H.: A Comparison of Analytically and Experimentally Determined Isothermal Pressure Losses in a Heat-Exchanger Installation. ARR 5C19 (WR A-26), May 1945.

- Adler, Alfred A.: Variation with Mach Number of Static and Total Pressures Through Various Screens. CB L5F28 (WR L-23), Feb. 1946.
- Brown, Clinton E.: Internal and External Aerodynamics of Ducted Bodies at Supersonic Speeds. CB L6B26 (WR L-728), April 1946.
- Reuter, George J. and Valerino, Michael F.: Intercooler Cooling-Air Weight Flow and Pressure Drop for Minimum Drag Loss. Rept. 784, 1947.
- Kuhn, Richard E. and Polhamus, Edward C.: Wind-Tunnel Investigation of Bomb-Bay Configurations Intended to Minimize the Tumbling of Light-Weight Bombs. RM L7D11, June 1947.
- Smith, Norman F.: Numerical Evaluation of Mass-Flow Coefficient and Associated Parameters from Wake-Survey Equations. TN 1381, Aug. 1947.
- Lankford, John L.: Investigation of the Pressure-Loss Characteristics of a Turbojet Inlet Screen. TN 1418, Sept. 1947.
- Goldstein, Arthur W.: Analysis of the Performance of a Jet Engine from Characteristics of the Components. I Aerodynamic and Matching Characteristics of the Turbine Component Determined with Cold Air. TN 1459, Oct. 1947.
- Sanger, E. and Bredt, J.: A Ram-Jet Engine for Fighters. TM 1106, Oct. 1947.
- Turner, L. Richard; Addie, Albert N. and Zimmerman, Richard H.: Charts for the Analysis of One-Dimensional Steady Compressible Flow. TN 1419, Jan. 1948.
- Regenscheit, B.: Venturi Tube with Varying Mass Flow. TM 1191, March 1948.
- Valerino, Michael F.: Generalized Charts for Determination of Pressure Drop of a High-Speed Compressible Fluid in Heat-Exchanger Passages. I - Air Heated in Smooth Passages of Constant Area with Constant Wall Temperature. RM E8G23, Oct. 1948.
- Guderley, G.: Nonstationary Gas Flow in Thin Pipes of Variable Cross Section. TM 1196, Dec. 1948.

NOSE INLETS

(1.4.1)

- Gough, Melvin N.: Effect of the Angular Position of the Section of a Ring Cowling on the High Speed of an XF7C-1 Airplane. TN 355, Nov. 1930.
- Stipa, Luigi: Stipa Monoplane with Venturi Fuselage. TM 753, Sept. 1934.
- Stickle, George W.: Design of NACA Cowlings for Radial Air-Cooled Engines. Rept. 662, 1939.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing-Cooling Ducts. Effects of Propeller Slipstream. ACR, March 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Nose- and Side-Entrance Blower Cooling Systems for Radial Engines. ACR, July 1939.
- Stickle, George W.: Flight Tests of NACA Nose-Slot Cowlings on the BFC-1 Airplane. TN 720, Aug. 1939.
- McHugh, James G.: Progress Report on Cowlings for Air-Cooled Engines Investigated in the NACA 19-Foot Pressure Wind Tunnel. ARR, July 1941.
- Johnston, J. Ford and Cavallo, Stefan A.: Flight Investigation of the Performance and Cooling Characteristics of an NACA C Cowling on the XP-42 Airplane. MR (WR L-612), Nov. 1942.
- Nichols, Mark R. and Dennard, John S.:
 An Investigation of the Ranger V-700-8
 Engine Installation for the Edo Xose-I
 Airplane. II Aerodynamics (TED
 No. NACA 044). MR L5112b
 (WR L-562), Oct. 1945.
- Kuenzig, John K. and Palter, Herman: Aerodynamics of the Carburetor Air Scoop and the Engine Cowling of the XTB2D-1 Airplane. MR E6E27 (WR E-280), June 1946.
- Johnson, Harold I.: Flight Investigation to Improve the Dynamic Longitudinal Stability and Control-Feel Characteristics of the P-63A-1 Airplane (AAF No. 42-68889) with Closely Balanced Experimental Elevators. MR L6E20 (WR L-730), July 1946.
- Johnston, J. Ford; Klawans, Bernard B. and Danforth, Edward C. B., III: Flight Investigation of Factors Affecting the Carburetor Ram and Nacelle Drag of an A-26B Airplane. MR L6F21 (WR L-740), July 1946.

CENTRAL (1.4.1.1)

- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine - I. Rept. 313, 1929.
- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine - II. Rept. 314, 1929.
- McAvoy, William H.; Schey, Oscar W. and Young, Alfred W.: The Effect on Airplane Performance of the Factors that Must Be Considered in Applying Low-Drag Cowling to Radial Engines. Rept. 414, 1932.
- Draley, Eugene C.: High-Speed Drag Tests of Several Fuselage Shapes in Combination with a Wing. ACR (WR L-542), Aug. 1940.
- Becker, John V. and Baals, Donald D.: Wind Tunnel Tests of a Submerged-Engine Fuselage Design. ACR (WR L-485), Oct. 1940.
- Becker, John V.: Wind Tunnel Tests of Air Inlet and Outlet Openings on a Streamline Body. ACR (WR L-300), Nov. 1940.
- Turner, L. I., Jr.; Biermann, David and Boothby, W. B.: Cooling Tests of an Airplane Equipped with an NACA Cowling and a Wing-Duct Cooling System. TN 813, June 1941.
- Robinson, Russell G. and Becker, John V.: High-Speed Tests of Conventional Radial-Engine Cowlings. Rept. 745, 1942.
- Becker, John V.: High Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.
- Becker, John V. and Baals, Donald D.: High-Speed Tests of a Ducted Body with Various Air-Outlet Openings. ACR (WR L-486), May 1942.
- Ellerbrock, Herman H., Jr. and Wilson, Herbert A., Jr.: Cowling and Cooling Tests of a Fleetwing Model 33 Airplane in Flight. MR (WR L-632), May 1944.
- Corson, Blake W., Jr. and McLellan, Charles H.: Cooling Characteristics of a Pratt & Whitney R-2800 Engine Installed in an NACA Short-Nose High-Inlet-Velocity Cowling. ACR L4F06 (WR L-207), June 1944.

- Central Nose Inlets (Cont.)
- Katzoff, S.: High-Altitude Cooling. V Cowling and Ducting. ARR L4I11d (WR L-775), Sept. 1944.
- Brown, Clinton E. and Parker, Hermon M.:
 A Method for the Calculation of External Lift, Moment, and Pressure
 Drag of Slender Open-Nose Bodies of
 Revolution at Supersonic Speeds.
 Rept. 808, 1945.
- Allen, H. Julian; Frick, Charles W. and Erickson, Myles D.: An Experimental Investigation of Several Low-Drag Wing Nacelle Combinations with Internal Air Flow. ACR 5A15, March 1945.
- Kantrowitz, Arthur and Donaldson, Coleman duP.: Preliminary Investigation of Supersonic Diffusers. ACR L5D20 (WR L-713), May 1945.
- Baals, Donald D.; Smith, Norman F. and Wright, John B.: The Development and Application of High-Critical-Speed Nose Inlets. ACR L5F30a (WR L-729), July 1945.
- Ilgmann, G. and Möller, E.: Three-Component Force and Mass-Flow Measurements on a Jet Nacelle. TM 1149, June 1947.
- Nichols, Mark R. and Keith, Arvid L., Jr.: Investigation of a Systematic Group of NACA 1-Series Cowlings with and Without Spinners. RM L8A15, May 1948.
- Boswinkle, Robert W., Jr.: Air-Flow Surveys in the Vicinity of Representative NACA 1-Series Cowlings. RM L8A15a, May 1948.
- Boelter, L. M. K.; Young, G. and Iversen, H. W.: An Investigation of Aircraft Heaters. XXVII - Distribution of Heat-Transfer Rate in the Entrance Section of a Circular Tube. TN 1451, July 1948.
- Zobel, Th.: Flow Measurement by Means of Light Interferences. TM 1253, Aug. 1949.

ANNULAR (1.4.1.2)

Bailey, F. J., Jr.; Johnston, J. Ford and Voglewede, T. J.: Flight Investigation of the Performance and Cooling Characteristics of a Long-Nose High-Inlet-Velocity Cowling on the XP-42 Airplane. ARR (WR L-356), April 1942.

- Johnston, J. Ford: Review of Flight Tests of NACA C and D Cowlings on the XP-42 Airplane. Rept. 771, 1943.
- Bailey, F. J., Jr. and Johnston, J. Ford:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane.
 I High-Inlet-Velocity Cowling with
 Propeller Cuffs Tested in High-Speed
 Level Flight. ARR (WR L-383), Jan.
 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane.
 II Low-Inlet-Velocity Cowling with
 Axial-Flow Fan and Propeller Cuffs.
 ARR (WR L-243), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane. III Low-Inlet-Velocity Cowling Without
 Fan or Propeller Cuffs, with AxialFlow Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR
 (WR L-508), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane.
 IV High-Inlet-Velocity Cowling
 Tested in Climb with and Without
 Propeller Cuffs and in High-Speed
 Level Flight Without Propeller Cuffs.
 ARR (WR L-285), Jan. 1943.
- Becker, John V. and Mattson, Axel T.: The Effect of Spinner-Body Gap on the Pressures Available for Cooling in the NACA E-Type Cowling. CB (WR L-497), March 1943.
- Ellerbrock, Herman H., Jr. and Wilson, Herbert A., Jr.: Cowling and Cooling Tests of a Fleetwing Model 33 Airplane in Flight. MR (WR L-632), May 1944.
- Oswatitsch, Kl.: Pressure Recovery for Missiles with Reaction Propulsion at High Supersonic Speeds (The Efficiency of Shock Diffusers). TM 1140, June 1947.
- Nichols, Mark R. and Keith, Arvid L., Jr.: Investigation of a Systematic Group of NACA 1-Series Cowlings with and Without Spinners. RM L8A15, May 1948.
- Boswinkle, Robert W., Jr.: Air-Flow Surveys in the Vicinity of Representative NACA 1-Series Cowlings. RM L8A15a, May 1948.
- Schwartz, Ira R.: Investigations of an Annular Diffuser-Fan Combination Handling Rotating Flow. RM L9B28, April 1949.

LEADING EDGE INLETS

(1.4.2)

- Biermann, David and Valentine, E. Floyd: Preliminary Model Tests of a Wing-Duct Cooling System for Radial Engines. ACR, Feb. 1939.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing-Cooling Ducts. Effects of Propeller Slipstream. ACR, March 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Blowers of Three Designs Operating in Conjunction with a Wing-Duct Cooling System for Radial Engines. ACR, June 1939.
- Biermann, David and McLellan, Charles H.: Wind-Tunnel Investigation of Rectangular Air-Duct Entrances in the Leading Edge of an NACA 23018 Wing. ACR, Sept. 1940.
- Biermann, David and Corson, Blake W., Jr.: Model Tests of a Wing-Duct System for Auxiliary Air Supply. ACR, Jan. 1941.
- Turner, L. I., Jr.; Biermann, David and Boothby, W. B.: Cooling Tests of an Airplane Equipped with an NACA Cowling and a Wing-Duct Cooling System. TN 813, June 1941.
- Harris, Thomas A. and Recant, Isidore G.: Investigation in the 7- by 10-Foot Wind Tunnel of Ducts for Cooling Radiators Within an Airplane Wing. Rept. 743, 1942.
- Harmon, Hubert N.: Wind-Tunnel Tests of Several Duct Entrances in the Leading Edge of an NACA 23018 Wing. ARR, Oct. 1942.
- Nelson, W. J. and Czarnecki, K. R.: Wind-Tunnel Investigation of Wing Ducts on a Single-Engine Pursuit Airplane. ARR 3J13 (WR L-407), Oct. 1943.
- Katzoff, S.: High-Altitude Cooling. V Cowling and Ducting. ARR L4I11d (WR L-775), Sept. 1944.
- Smith, Norman F.: High-Speed Investigation of Low-Drag Wing Inlets. ACR L4I18 (WR L-732), Sept. 1944.
- Quinn, John H., Jr.: Summary of Data Relating to the Effects of Wing Machine-Gun and Cannon Installations on the Aerodynamic Characteristics of Airplanes. ACR L4L21 (WR L-158), Jan. 1945.

- Lange, Roy H.: A Summary of Drag Results from Recent Langley Full-Scale-Tunnel Tests of Army and Navy Airplanes. ACR L5A30 (WR L-108), Feb. 1945.
- Chapman, Dean R.: Investigation of Slipstream Effects on a Wing-Inlet Oil-Cooler Ducting System of a Twin-Engine Airplane in the Ames 40- by 80-Foot Wind Tunnel. MR A5C10 (WR A-1), March 1945.

SIDE INLETS

(1.4.3)

Biermann, David and Valentine, E. Floyd: Preliminary Tests of Nose- and Side-Entrance Blower Cooling Systems for Radial Engines. ACR, July 1939.

SCOOPS (1.4.3.1)

- Highley, Frank H.: Wind-Tunnel Tests of Carburetor-Intake Rams. TN 631, Jan. 1938.
- Silverstein, Abe and Wilson, Herbert A., Jr.: Aerodynamic Characteristics of a 4-Engine Monoplane Showing Effects of Enclosing the Engines in the Wing and Comparisons of Tractor- and Pusher-Propeller Arrangements. ACR (WR L-456), April 1938.
- Naiman, Irven and Hill, Paul R.: The Effect of External Shape upon the Drag of a Scoop. ACR (WR L-331), July 1941.
- Nelson, W. J. and Czarnecki, K. R.: Wind-Tunnel Investigation of Carburetor-Air Inlets. ARR (WR L-166), Feb. 1942.
- Bell, E. Barton and DeKoster, Lucas J.: A Preliminary Investigation of the Characteristics of Air Scoops on a Fuselage. ARR (WR L-275), Dec. 1942.
- Matthews, Howard F.: Elimination of Rumble from the Cooling Ducts of a Single-Engine Pursuit Airplane. RMR (WR A-70), Aug. 1943.
- Nichols, Mark R.; Keith, Arvid L., Jr. and Boswinkle, Robert W., Jr.: A Wind-Tunnel Investigation of Carburetor Air Scoops Designed for the Douglas XTB2D-1 Airplane. MR (WR L-751), June 1944.
- Lange, Roy H.: A Summary of Drag Results from Recent Langley Full-Scale-Tunnel Tests of Army and Navy Airplanes. ACR L5A30 (WR L-108), Feb. 1945.

- Smith, Norman F. and Baals, Donald D.: Wind-Tunnel Investigation of a High-Critical-Speed Fuselage Scoop Including the Effects of Boundary Layer. ACR L5B01a, Feb. 1945.
- Preston, G. Merritt; Black, Fred O., Jr. and Jagger, James M.: Altitude-Wind-Tunnel Tests of the Bell YP-59A Power-Plant Installation. MR E5L17 (WR E-274), Feb. 1946.
- Anderson, Joseph L. and Tkac, Victor B.: High-Speed Wind-Tunnel Tests of a Model of the North American XP-82 Airplane. MR A6D03 (WR A-75), April 1946.
- Kuenzig, John K. and Palter, Herman: Aerodynamics of the Carburetor Air Scoop and the Engine Cowling of the XTB2D-1 Airplane. MR E6E27 WR E-280), June 1946.
- Von Glahn, Uwe and Renner, Clark E.: Development of a Protected Air Scoop for the Reduction of Induction-System Icing. TN 1134, Sept. 1946.

SUBMERGED (1.4.3.2)

- Frick, Charles W.; Davis, Wallace F.; Randall, Lauros and Mossman, Emmet A.: An Experimental Investigation of NACA Submerged Duct Entrances. ACR 5120, Oct. 1945.
- Hanson, Frederick H., Jr.: Tests of the Jet-Motor Air-Intake Duct System of a 1/4-Scale Stub-Wing Model on a Turbo-Propelled and Jet-Propelled Pursuit Airplane. MR A6A09 (WR A-85), May 1946.

DUCTS

(1.4.4)

- Peters, H.: Conversion of Energy in Cross-Sectional Divergences Under Different Conditions of Inflow. TM 737, March 1934.
- Stipa, Luigi: Stipa Monoplane with Venturi Fuselage. TM 753, Sept. 1934.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing Cooling Ducts. ACR, Oct. 1938.
- Winter, H.: Contribution to the Theory of the Heated Duct Radiator. TM 893, April 1939.

- Dearborn, C. H. and Silverstein, Abe: Drag Analysis of Single-Engine Military Airplanes Tested in the NACA Full-Scale Wind Tunnel. ACR (WR L-489), Oct. 1940.
- Becker, John V.: Wind Tunnel Tests of Air Inlet and Outlet Openings on a Streamline Body. ACR (WR L-300), Nov. 1940.
- Katzoff, S.: The Design of Cooling Ducts with Special Reference to the Boundary Layer at the Inlet. ACR (WR L-321), Dec. 1940.
- Linke, W.: Experimental Investigations on Freely Exposed Ducted Radiators. TM 970, March 1941.
- Corson, Blake W.: The Aerodynamics of a Wind-Tunnel Fan. TN 820, Aug. 1941.
- Becker, John V. and Baals, Donald D.: Analysis of Heat and Compressibility Effects in the Internal Flow Systems and High-Speed Tests of a Ram-Jet System. Rept. 773, 1942.
- Weske, John R.: Pressure Loss in Ducts with Compound Elbows. ARR (WR W-39), Feb. 1943.
- Nielsen, Jack N.: Effect of Turbulence on Air-Flow Measurements Behind Orifice Plates. ARR 3G30 (WR L-274), July 1943.
- Wood, George P. and Brevoort, Maurice J.: Design, Selection, and Installation of Aircraft Heat Exchangers. ARR 3G31 (WR L-341), July 1943.
- Czarnecki, K. R. and Nelson, W. J.: Wind-Tunnel Investigation of Rear Underslung Fuselage Ducts. ARR 3I21 (WR L-438), Sept. 1943.
- Nelson, W. J. and Czarnecki, K. R.: Wind-Tunnel Investigation of Wing Ducts on a Single-Engine Pursuit Airplane. ARR 3J13 (WR L-407), Oct. 1943.
- Nichols, Mark R.: An Experimental Investigation of the Intercooler and Charge-Air Duct Systems of the P-60A Airplane. ACR 3J14, Oct. 1943.
- Marquardt, R. E.: A Study of Cooling and Exhaust Disposal in Submerged Engine Installations. ACR 3J28, Oct. 1943.
- Nelson, W. J.; Czarnecki, K. R. and Harrington, Robert D.: Full-Scale Wind-Tunnel Investigation of Forward Underslung Cooling-Air Ducts. ARR L4H15 (WR L-115), Oct. 1944.

Ducts (Cont.)

- Hillendahl, Wesley H.: Comparison of Analytically and Experimentally Determined Isothermal Pressure Losses in a Heat-Exchanger Installation. ARR 5C19 (WR A-26), May 1945.
- Adler, Alfred A.: Variation with Mach Number of Static and Total Pressures Through Various Screens. CB L5F28 (WR L-23), Feb. 1946.
- Hanson, Frederick H., Jr.: Tests of the Jet-Motor Air-Intake Duct System of a 1/4-Scale Stub-Wing Model on a Turbo-Propelled and Jet-Propelled Pursuit Airplane. MR A6A09 (WR A-85), May 1946.
- Kuenzig, John K. and Palter, Herman: Aerodynamics of the Carburetor Air Scoop and the Engine Cowling of the XTB2D-1 Airplane. MR E6E27 (WR E-280), June 1946.
- Sipko, Michael A.; Cotton, Charles B. and Lusk, James B.: Use of Ducted Heat Baffles to Reduce Rear-Row Cylinder Temperatures of an Air-Cooled Aircraft Engine. TN 1053, Aug. 1946.
- Standahar, Ray M. and McCarty, James S.:
 Effect of Modifications to Induction
 System on Altitude Performance of
 V-1710-93 Engine. III Use of Parabolic Rotating Guide Vanes and NACADesigned Auxiliary-Stage Inlet Elbow
 and Interstage Duct. RM E6L27,
 Jan. 1947.
- Smith, Norman F.: Numerical Evaluation of Mass-Flow Coefficient and Associated Parameters from Wake-Survey Equations. TN 1381, Aug. 1947.
- Barina, Frank J.: Comparative Performance of Two Vaneless Diffusers Designed with Different Rates of Passage Curvature for Mixed-Flow Impellers. TN 1490, Nov. 1947.
- Huber, Paul W.; Fitton, Cliff E., Jr. and Delpino F.: Experimental Investigation of Moving Pressure Disturbances and Shock Waves and Correlation with One-Dimensional Unsteady-Flow Theory. TN 1903, July 1949.
- Alpert, Sumner: Design Method for Two-Dimensional Channels for Compressible Flow with Application to High-Solidity Cascades. TN 1931, Aug. 1949.

DIFFUSERS (1.4.4.1)

Ackeret, J.: Removing Boundary Layer by Suction. TM 395, Jan. 1926.

- Biermann, David and Corson, Blake W., Jr.: Model Tests of a Wing-Duct System for Auxiliary Air Supply. ACR, Jan. 1941.
- McLellan, Charles H. and Nichols, Mark R.: An Investigation of Diffuser-Resistance Combinations in Duct Systems. ARR (WR L-329), Feb. 1942.
- Nichols, Mark R.: Investigation of Flow Through an Intercooler Set at Various Angles to the Supply Duct. ARR (WR L-408), April 1942.
- Becker, John V. and Baals, Donald D.: High-Speed Tests of a Ducted Body with Various Air-Outlet Openings. ACR (WR L-486), May 1942.
- Harmon, Hubert N.: Wind-Tunnel Tests of Several Duct Entrances in the Leading Edge of an NACA 23018 Wing. ARR, Oct. 1942.
- Polikovsky, V. and Nevelson, M.: The Performance of a Vaneless Diffuser Fan. TM 1038, Dec. 1942.
- Brevoort, M. J.; Joyner, U. T. and Wood, George P.: The Reduction of Nonuseful Pressure Losses on Air-Cooled Engine Cylinders by Means of Improved Finning and Baffling. ACR (WR L-686), Feb. 1943.
- Dovjik, S. and Polikovsky W.: Experimental Investigation of a Model of a Two-Stage Turboblower. TM 1043, April 1943.
- Matthews, Howard F.: Elimination of Rumble from the Cooling Ducts of a Single-Engine Pursuit Airplane. RMR (WR A-70), Aug. 1943.
- Vedernifoff, A. N.: An Experimental Investigation of the Flow of Air in a Flat Broadening Channel. TM 1059, Jan. 1944.
- Habel, Louis W. and Korycinski, Peter F.:
 A Comparison of Three Spinner-Diffuser Designs in an NACA DS Cowling for the Pratt & Whitney R-2800 Engine.
 MR (WR L-579), June 1944.
- Henry, John R.: Design of Power-Plant Installations. Pressure-Loss Characteristics of Duct Components. ARR L4F26 (WR L-208), June 1944.
- Katzoff, S.: High-Altitude Cooling. V Cowling and Ducting. ARR L4I11d (WR L-775), Sept. 1944.
- Biebel, William J.: Low-Pressure Boundary-Layer Control in Diffusers and Bends. ARR L5C24 (WR L-84), April 1945.

- Diffusers Ducts (Cont.)
- Kantrowitz, Arthur and Donaldson, Coleman duP.: Preliminary Investigation of Supersonic Diffusers. ACR L5D20 (WR L-713), May 1945.
- Frick, Charles W.; Davis, Wallace F.; Randall, Lauros and Mossman, Emmet A.: An Experimental Investigation of NACA Submerged Duct Entrances. ACR 5120, Oct. 1945.
- Hanson, Frederick H., Jr.: Tests of the Jet-Motor Air-Intake Duct System of a 1/4-Scale Stub-Wing Model on a Turbo-Propelled and Jet-Propelled Pursuit Airplane. MR A6A09 (WR A-85), May 1946.
- Rollin, Vern G.: The Effect of Liquid and Ice Particles on the Erosion of a Supercharger-Inlet Cover and Diffuser Vanes. MR E6E31 (WR E-178), June 1946.
- Baas, Edmund J. and Dugan, Paul D.:
 Air-Flow and Performance Characteristics of Engine-Stage Supercharger of R-3350-21 Engine. II Effect of Design Variables. MR E6G25 (WR E-285), Aug. 1946.
- Bohanon, H. R.; Gabriel, David S. and Essig, Robert H.: Jet Diffuser for Simulating Ram Conditions on a Turbojet-Engine Static Test Stand. RM E6K29, Jan. 1947.
- Brown, W. Byron: Friction Coefficients in a Vaneless Diffuser. TN 1311, May 1947.
- Pierpont, P. Kenneth: Investigation of Suction-Slot Shapes for Controlling a Turbulent Boundary Layer. TN 1292, June 1947.
- Oswatitsch, Kl.: Pressure Recovery for Missiles with Reaction Propulsion at High Supersonic Speeds (The Efficiency of Shock Diffusers). TM 1140, June 1947.
- Eggink: Compression Shocks of Detached Flow. TM 1150, June 1947.
- Brown, W. Byron and Bradshaw, Guy R.: Method of Designing Vaneless Diffusers and Experimental Investigation of Certain Undetermined Parameters. TN 1426, Sept. 1947.
- Gourzhienko, G. A.: The Turbulent Flow in Diffusers of Small Divergence Angle. TM 1137, Oct. 1947.

- Barina, Frank J.: Comparative Performance of Two Vaneless Diffusers Designed with Different Rates of Passage Curvature for Mixed-Flow Impellers. TN 1490, Nov. 1947.
- Schubauer, G. B. and Spangenberg, W. G.: Effect of Screens in Wide-Angle Diffusers. TN 1610, July 1948.
- Essig, Robert H.; Bohanon, H. R. and Gabriel, David S.: Jet Diffuser for Simulating Ram-Pressure Conditions on a Turbojet-Engine Static Test Stand. TN 1687, Aug. 1948.
- Bradshaw, Guy R. and Laskin, Eugene B.: Experimental Study of Effect of Vaneless-Diffuser Diameter on Diffuser Performance. TN 1713, Oct. 1948.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I - Laminar Flows. TM 1217, April 1949.
- Hess, Robert V.: Study of Unsteady Flow Disturbances of Large and Small Amplitudes Moving Through Supersonic or Subsonic Steady Flows. TN 1878, May 1949.
- Schwartz, Ira R.: Investigations of an Annular Diffuser-Fan Combination Handling Rotating Flow. RM L9B28, April 1949.

NOZZLES (1.4.4.2)

- Mueller, H. and Peters, H.: Coefficients of Flow of Standard Nozzles. TM 549, Jan. 1930.
- Oestrich, Hermann: Prospects for Jet Propulsion of Airplanes with Special Reference to Exhaust Gases. Misc. Paper No. 34, May 1932.
- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. Part I -Flows with No Energy Dissipation. TM 934, March 1940.
- Pinkel, Benjamin and Turner, L. Richard: Flight Tests of Exhaust Gas Jet Propulsion. ACR (WR E-105), Nov. 1940.
- Turner, L. Richard and White, Maurice D.: Flight Tests of NACA Jet-Propulsion Exhaust Stacks on the Supermarine Spitfire Airplane. MR (WR L-680), Dec. 1942.
- Pinkel, Benjamin; Turner, L. Richard; Voss, Fred and Humble, Leroy V.: Exhaust-Stack Nozzle Area and Shape for Individual Cylinder Exhaust-Gas Jet-Propulsion System. Rept. 765, 1943.

- Nozzles Ducts (Cont.)
- Kantrowitz, Arthur; Street, Robert E. and Erwin, John R.: Study of the Two-Dimensional Flow Through a Converging-Diverging Nozzle. CB 3D24, April 1943.
- Donaldson, Coleman duP.: Effects of Interaction Between Normal Shock and Boundary Layer. CB 4A27, Jan. 1944.
- Kantrowitz, Arthur: Effects of Heat-Capacity Lag in Gas Dynamics. ARR 4A22 (WR L-457), Jan. 1944.
- Kisenko, M. S.: Comparative Results of Tests of Several Different Types of Nozzles. TM 1066, June 1944.
- Emmons, Howard W.: The Theoretical Flow of a Frictionless, Adiabatic, Perfect Gas Inside of a Two-Dimensional Hyperbolic Nozzle. TN 1003, May 1946.
- Sauer, R.: Method of Characteristics for Three-Dimensional Axially Symmetrical Supersonic Flows. TM 1133, Jan. 1947.
- Kantrowitz, Arthur: The Formation and Stability of Normal Shock Waves in Channel Flows. TN 1225, March 1947.
- Busemann, Adolph: Rockets Using Liquid Oxygen. TM 1144, April 1947.
- Sauer, R.: General Characteristics of the Flow Through Nozzles at Near Critical Speeds. TM 1147, June 1947.
- Weise, A.: The Separation of Flow Due to Compressibility Shock. TM 1152, July 1947.
- Ivey, H. Reese; Bowen, Edward N., Jr. and Oborny, Lester F.: Introduction to the Problem of Rocket-Powered Aircraft Performance. TN 1401, Dec. 1947.
- Gray, W. H. and Davidson, R. E.: The Effect of Tip Modification and Thermal De-Icing Air Flow on Propeller Performance as Determined from Wind-Tunnel Tests. TN 1540, Feb. 1948.
- Crown, J. Conrad: Supersonic Nozzle Design. TN 1651, June 1948.
- Pinkel, I. Irving: Equations for the Design of Two-Dimensional Supersonic Nozzles. RM E8B02, June 1948.
- Grey, Ralph E., Jr. and Wilsted, H.
 Dean: Performance of Conical Jet
 Nozzles in Terms of Flow and Velocity Coefficients. TN 1757, Nov. 1948.

- Shapiro, Ascher H. and Smith, R. Douglas: Friction Coefficients in the Inlet Length of Smooth, Round Tubes. TN 1785, Nov. 1948.
- Heidmann, Marcus F. and Novik, David: Control Considerations for Optimum-Power Proportionment in Turbine-Propeller Engines. TN 1762, Dec. 1948.
- Oswatitsch, Kl. and Rothstein, W.: Flow Pattern in a Converging-Diverging Nozzle. TM 1215, March 1949.
- Falkovich, S. V.: On the Theory of the Laval Nozzle. TM 1212, April 1949.
- Hess, Robert V.: Study of Unsteady Flow Disturbances of Large and Small Amplitudes Moving Through Supersonic or Subsonic Steady Flows. TN 1878, May 1949.

PIPES (1.4.4.3)

- Schiller, L. and Hermann, R.: Resistance of Plates and Pipes at High Reynolds Numbers. TM 600, Jan. 1931.
- Krober, G.: Guide Vanes for Deflecting Fluid Currents with Small Loss of Energy. TM 722, Sept. 1933.
- Frössel, W.: Flow in Smooth Straight Pipes at Velocities Above and Below Sound Velocity. TM 844, Jan. 1938.
- Mayer, Edwin: Effect of Transition In Cross-Sectional Shape on the Development of the Velocity and Pressure Distribution of Turbulent Flow in Pipes. TM 903, Aug. 1939.
- Nichols, Mark R.: Investigation of Flow Through an Intercooler Set at Various Angles to the Supply Duct. ARR (WR L-408), April 1942.
- Mattioli, G. D.: Theory of Heat Transfer in Smooth and Rough Pipes. TM 1037, Dec. 1942.
- Keenan, Joseph H. and Neumann, Ernest P.: Measurements of Friction Coefficients in a Pipe for Subsonic and Supersonic Flow of Air. ARR 3G13 (WR W-44), July 1943.
- Sanders, J. C.; Hilgendorf, J. A. and Peters, M. D.: The Effect of Continuous Knock on the Endurance of an Aircraft Engine Cylinder. ARR 4C16 (WR E-121), March 1944.
- Becker, John V. and Baals, Donald D.: Simple Curves for Determining the Effects of Compressibility on Pressure Drop Through Radiators. ACR L4I23 (WR L-6), Sept. 1944.

Pipes - Ducts (Cont.)

- Nielsen, Jack N.: Compressibility Effects on Heat Transfer and Pressure Drop in Smooth Cylindrical Tubes. ARR L4C16 (WR L-179), Oct. 1944.
- Keenan, Joseph H. and Neumann, Ernest P.: Friction in Pipes at Supersonic and Subsonic Velocities. TN 963, Jan. 1945.
- McAdams, William H.: Nicolai, Lloyd A. and Keenan, Joseph H .: Measurements of Recovery Factors and Coefficients of Heat Transfer in a Tube for Subsonic Flow of Air. TN 985, June 1945.
- Ellerbrock, Herman H., Jr.: Wcislo, Chester R. and Dexter, Howard E.: Analysis, Verification, and Application of Equations and Procedures for Design of Exhaust-Pipe Shrouds. TN 1495, Dec. 1947.
- Weske, John R.: Experimental Investigation of Velocity Distributions Downstream of Single Duct Bends. TN 1471, Jan. 1948.
- Humble, Leroy V.: Lowdermilk, Warren H. and Grele, Milton: Heat Transfer from High-Temperature Surfaces to Fluids. I - Preliminary Investigation with Air in Inconel Tube with Rounded Entrance, Inside Diameter of 0.4 Inch, and Length of 24 Inches. RM E7L31, May 1948.
- Boelter, L. M. K.; Young, G. and Iversen, H. W.: An Investigation of Aircraft Heaters. XXVII - Distribution of Heat-Transfer Rate in the Entrance Section of a Circular Tube. TN 1451, July 1948.
- Shapiro, Ascher H. and Smith, R. Douglas: Friction Coefficients in the Inlet Length of Smooth, Round Tubes. TN 1785, Nov. 1948.
- Lowdermilk, Warren H. and Grele, Milton D.: Heat Transfer from High-Temperature Surfaces to Fluids. II -Correlation of Heat-Transfer and Friction Data for Air Flowing in Inconel Tube with Rounded Entrance. RM E8L03, March 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II Turbulent Flows. TM 1218, April 1949.
- Sams, Eldon W. and Desmon, Leland G.: Heat Transfer from High-Temperature Surfaces to Fluids. III - Correlation of Heat-Transfer Data for Air Flowing in Silicon Carbide Tube with Rounded Entrance, Inside Diameter of 3/4 Inch, and Effective Length of 12 Inches. RM E9D12, June 1949.

BENDS (1.4.4.4)

- Witoszynski, Professor C .: Change of 180° in the Direction of a Uniform Current of Air. TM 350, Feb. 1926.
- Krober, G.: Guide Vanes for Deflecting Fluid Currents with Small Loss of Energy. TM 722, Sept. 1933.
- Biermann, David and Corson, Blake W. Jr.: Model Tests of a Wing-Duct System for Auxiliary Air Supply. ACR,
- McLellan, Charles H. and Bartlett, Walter A., Jr.: Investigation of Air Flow in Right-Angle Elbows in a Rectangular Duct. ARR (WR L-328), Oct. 1941.
- Nichols, Mark R.: Investigation of Flow Through an Intercooler Set at Various Angles to the Supply Duct. ARR (WR L-408), April 1942.
- Weske, John R.: Pressure Loss in Ducts with Compound Elbows. ARR (WR W-39), Feb. 1943.
- Henry, John R.: Design of Power-Plant Installations Pressure-Loss Characteristics of Duct Components. ARR L4F26 (WR L-208), June 1944.
- Katzoff, S.: High-Altitude Cooling V -Cowling and Ducting. ARR L4I11d (WR L-775), Sept. 1944.
- Biebel, William J.: Low-Pressure Boundary-Layer Control in Diffusers and Bends. ARR L5C24 (WR L-84), April 1945.
- Moses, Jason J.: Effect of Various Carburetor Throttle Settings on the Flow Characteristics at the Outlet of a Supercharger Inlet Elbow. ARR E5E19a (WR E-72), June 1945.
- Baas, Edmund J.; Monroe, William R. and Mesrobian, John M.: Air-Flow and Performance Characteristics of the Engine-Stage Supercharger of the Wright R-3350-21 Engine. Part I Effect of Operating Variables. MR E5H28 (WR E-266), Aug. 1945.
- Guentert, Donald C. and Baas, Edmund J.: The Effect of Carburetor Throttle Settings on the Velocity Distribution at the Outlet of a Vaned and a Vaneless Supercharger Inlet Elbow. ARR E5G23 (WR E-108), Sept. 1945.
- Guentert, D. C.; Todd, D. J. and Sim-mons, W. P., Jr.: Flow Tests of an NACA-Designed Supercharger Inlet Elbow and the Effects of Various Components on the Flow Characteristics at the Elbow Outlet. TN 1148, Oct. 1946.

Bends - Ducts (Cont.)

Weske, John R.: Experimental Investigation of Velocity Distributions Downstream of Single Duct Bends. TN 1471, Jan. 1948.

EXITS

(1.4.5)

- Ware, Marsden: Effect of the Reversal of Air Flow upon the Discharge Coefficient of Durley Orifices. TN 40, Feb. 1921.
- Stickle, Geroge W.: Design of NACA Cowlings for Radial Air-Cooled Engines. Rept. 662, 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Model Tests of a Wing-Duct Cooling System for Radial Engines. ACR, Feb. 1939.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing-Cooling Ducts. Effects of Propeller Slipstream. ACR, March 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Blowers of Three Designs Operating in Conjunction with a Wing-Duct Cooling System for Radial Engines. ACR, June 1939.
- Stickle, George W.; Naiman, Irven and Crigler, John L.: Effect of Exit-Slot Position and Opening on the Available Cooling Pressure for NACA Nose-Slot Cowlings. Rept. 687, 1940.
- McHugh, James G.: Comparison of Three Exit-Area Control Devices on an NACA Cowling. ACR, May 1940.
- Biermann, David and McLellan, Charles H.: Wind-Tunnel Investigation of Rectangular Air-Duct Entrances in the Leading Edge of an NACA 23018 Wing. ACR, Sept. 1940.
- Becker, John V.: Wind Tunnel Tests of Air Inlet and Outlet Openings on a Streamline Body. ACR (WR L-300), Nov. 1940.
- Stickle, George W.; Naiman, Irven and Crigler, John L.: Pressure Available for Cooling with Cowling Flaps. Rept. 720, 1941.
- Becker, John V. and Baals, Donald D.: High Speed Tests of a Ducted Body with Various Air-Outlet Openings. ACR (WR L-486), May 1942.
- Molloy, Richard C. and Brewster, James H., III: New Research on the Cowling and Cooling of Radial Engines. ARR, May 1942.

- Katzoff, S.: High-Altitude Cooling V -Cowling and Ducting. ARR L4I11d (WR L-775), Sept. 1944.
- Joyner, Upshur T.: Charts of Pressure, Density, and Temperature Changes at an Abrupt Increase in Cross-Sectional Area of Flow of Compressible Air. ARR L4L19 (WR L-13), Jan. 1945.
- Quinn, John H., Jr: Summary of Data Relating to the Effects of Wing Machine-Gun and Cannon Installations on the Aerodynamic Characteristics of Airplanes. ACR L4L21 (WR L-158), Jan. 1945.
- Freeman, Hugh B.: Boundary-Layer-Control Tests of Two Wings in the Langley Propeller-Research Tunnel. TN 1007, Jan. 1946.
- Ellerbrock, Herman H., Jr.: General Treatment of Compressible Flow in Ejectors and Example of Its Application to Problem of Effect of Ejector Addition on Thrust of Jet-Propulsion Units. RM L6L23, June 1947.
- Küchemann, D.: Jet Diffusion in Proximity of a Wall. TM 1214, May 1949.
- Corrsin, Stanley and Uberoi, Mahinder S.: Further Experiments on the Flow and Heat Transfer in a Heated Turbulent Air Jet. TN 1865, April 1949.

JET PUMPS AND THRUST AUGMENTORS

(1.4.6)

- De Caria, Ugo: Counter-Propellers. TM 587, Oct. 1930.
- Jacobs, Eastman N. and Shoemaker, James M.: Tests on Thrust Augmentors for Jet Propulsion. TN 431, Sept. 1932.
- Schubauer, G. B.: Jet Propulsion with Special Reference to Thrust Augmentors. TN 442, Jan. 1933.
- Lesley, E. P.: Experiments with a Counter-Propeller. TN 453, March 1933.
- Benson, William M.: Tests of a Contra-Propeller for Aircraft. TN 677, Nov. 1938.
- Betz, Albert: The Theory of Contra-Vanes Applied to the Propeller. TM 909, Sept. 1939.
- Turner, L. Richard: Consideration of Auxiliary Jet Propulsion for Assisting Take-Off. ACR (WR E-49), May 1940.

- Jet Pumps and Thrust Augmentors (Cont.)
- Flügel, Gustav: The Design of Jet Pumps. TM 982, July 1941.
- Turner, L. Richard and White, Maurice D.: Flight Tests of NACA Jet-Propulsion Exhaust Stacks on the Supermarine Spitfire Airplane. MR (WR L-680), Dec. 1942.
- Morrisson, Reeves: Jet Ejectors and Augmentation. ACR, Sept. 1942.
- Marquardt, R. E.: A Study of Cooling and Exhaust Disposal in Submerged Engine Installations. ACR 3J28, Oct. 1943.
- Ellerbrock, Herman H., Jr.: General Treatment of Compressible Flow in Ejectors and Example of Its Application to Problems of Effect of Ejector Addition on Thrust of Jet Propulsion Units. RM L6L23, June 1947.
- Turner, L. Richard; Addie, Albert N. and Zimmerman, Richard H.: Charts for the Analysis of One-Dimensional Steady Compressible Flow. TN 1419, Jan. 1948.

COMPRESSORS

(1.4.7)

- Von der Null, Werner: The Design of Airplane Superchargers. TM 839, Oct. 1937.
- Betz, A. and Flugge-Lotz, I.: Design of Centrifugal Impeller Blades. TM 902, July 1939.
- Ku, P. M. and Wang, C. H.: A Study of the Centrifugal Supercharger. ACR, June 1940.
- Kollman, K.: Limits of Single-Stage Compression in Centrifugal Superchargers for Aircraft. TM 954, Sept. 1940.
- Sorensen, E.: Potential Flow Through Centrifugal Pumps and Turbines. TM 973, April 1941.
- Mutterperl, William: The Conformal Transformation of an Airfoil into a Straight Line and Its Application to the Inverse Problem of Airfoil Theory. ARR L4K22a (WR L-113), Dec. 1944.
- Benser, William A. and Moses, Jason J.: An Investigation of the Backflow Phenomenon in Centrifugal Superchargers. Rept. 806, 1945.
- Bullock, Robert O.; Keetch, Robert C. and Moses, Jason J.: A Method of Matching the Performance of Compressor Systems with that of Aircraft Power Sections. Rept. 815, 1945.

- King, J. Austin and Klein, Harold: Performance Characteristics of a Junkers Jumo 211F Engine Supercharger with a DVL Fully Shrouded Impeller and Scroll Diffuser. ARR E5B03 (WR E-3), Feb. 1945.
- Bogdonoff, Seymour M. and Bogdonoff, Harriet E.: Blade Design Data for Axial-Flow Fans and Compressors. ACR L5F07a (WR L-635), July 1945.
- NACA Subcommittee on Supercharger Compressors: Standard Procedures for Rating and Testing Centrifugal Compressors. ARR E5F13 (WR E-6), Aug. 1945.
- NACA Subcommittee on Supercharger Compressors: Standard Method of Graphical Presentation of Centrifugal Compressor Performance. ARR E5F13a (WR E-4), Aug. 1945.
- Brown, W. Byron: Computation of the Mean Tangential Velocity of the Air Leaving the Blade Tips of a Centrifugal Supercharger. RB E5G21 (WR E-11), Aug. 1945.
- Bullock, Robert O.; Wilcox, Ward W. and Moses, Jason J.: Experimental and Theoretical Studies of Surging in Continuous-Flow Compressors. Rept. 861, 1946.
- Fischer, Karl: Investigation of Flow in a Centrifugal Pump. TM 1089, July 1946.
- Kohl, Robert C. and Diggs, Donald R.: Effect of Various Methods of Boundary-Layer Control on Performance of V-1710-93 Engine-Stage Supercharger. RM E6L19, Jan. 1947.
- Encke, W.: Investigations on Experimental Impellers for Axial Blowers. TM 1123, April 1947.
- Eckert, B.: Recent Results on High-Pressure Axial Blowers. TM 1128, April 1947.
- Bogdonoff, Seymour M. and Hess, Eugene E.: Axial-Flow Fan and Compressor Blade Design Data at 52.5° Stagger and Further Verification of Cascade Data by Rotor Tests. TN 1271, April 1947.
- Herrig, L. Joseph and Bogdonoff, Seymour M.: Performance of an Axial-Flow Compressor Rotor Designed for a Pitch-Section Lift Coefficient of 1.20. TN 1388, July 1947.
- Eckert, B.; Pflüger, F. and Weinig, F.: The Influence of the Diameter Ratio on the Characteristics Diagram of the Axial Compressor. TM 1125, April 1948.

Compressors (Cont.)

- Mankuta, Harry and Guentert, Donald C.: Investigation of Performance of Single-Stage Axial-Flow Compressor Using NACA 5509-34 Blade Section. RM E8F30, Sept. 1948.
- Wu, Chung-Hua and Wolfenstein, Lincoln: Application of Radial-Equilibrium Condition to Axial-Flow Compressor and Turbine Design. TN 1795. Jan. 1949.

CASCADES (1.4.7.1)

- Krober, G.: Guide Vanes for Deflecting Fluid Currents with Small Loss of Energy. TM 722, Sept. 1933.
- Pistolesi, E.: On the Calculation of Flow Past an Infinite Screen of Thin Airfoils. TM 968, Feb. 1941.
- Betz, Albert: Diagrams for Calculation of Airfoil Lattices. TM 1022, July 1942
- Kantrowitz, Arthur and Daum, Fred L.: Preliminary Experimental Investigation of Airfoils in Cascade. CB (WR L-231), July 1942.
- Garrick, I. E.: On the Plane Potential Flow Past a Lattice of Arbitrary Airfoils. Rept. 788, 1944.
- Mutterperl, William: High-Altitude Cooling. VI - Axial-Flow Fans and Cooling Power. ARR L4I11e (WR L-776), Sept. 1944.
- Kantrowitz, Arthur and Erwin, John R.: Cascade Investigation of Buckets for a Modern Aircraft Turbosupercharger. ACR L4J25 (WR L-765), Nov. 1944.
- Mutterperl, William: A Solution of the Direct and Inverse Potential Problems for Arbitrary Cascades of Airfoils. ARR L4K22b (WR L-81), Dec. 1944.
- Perl, W. and Tucker, M.: A General Representation for Axial-Flow Fans and Turbines. Rept. 814, 1945.
- Zimmey, Charles M. and Lappi, Viola M.: Data for Design of Entrance Vanes from Two-Dimensional Tests of Airfoils in Cascade. ACR L5G18 (WR L-188), Oct. 1945.
- Perl, W. and Epstein, H. T.: Some Effects of Compressibility on the Flow Through Fans and Turbines. Rept. 842, 1946.

- Goldstein, Arthur W. and Jerison, Meyer: Isolated and Cascade Airfoils with Prescribed Velocity Distribution. Rept. 869, 1947.
- Weske, John R.: An Investigation of the Aerodynamic Characteristics of a Rotating Axial-Flow Blade Grid. TN 1128, Feb. 1947.
- Bogdonoff, Seymour M. and Herrig, L. Joseph: Performance of Axial-Flow Fan and Compressor Blades Designed for High Loadings. TN 1201, Feb. 1947.
- Katzoff, S.; Finn, Robert S. and Laurence, James C.: Interference Method for Obtaining the Potential Flow Past an Arbitrary Cascade of Airfoils. TN 1252, May 1947.
- Diesendruck, Leo: Iterative Interference Methods in the Design of Thin Cascade Blades. TN 1254, May 1947.
- Von Vietinghoff-Scheel, K.: Laboratory Report on the Investigation of the Flow Around Two Turbine-Blade Profiles Using the Interferometer Method. TM 1171, July 1947.
- Katzoff, S.; Bogdonoff, Harriet E. and Boyet, Howard: Comparisons of Theoretical and Experimental Lift and Pressure Distributions on Airfoils in Cascade. TN 1376, July 1947.
- Spurr, Robert A. and Allen, H. Julian: A Theory of Unstaggered Airfoil Cascades in Compressible Flow. RM A7E29, July 1947.
- Shimoyama, Yoshinori: Tests of Cascades of Airfoils for Retarded Flow. TM 1190, Oct. 1947.
- Kahane, A.: Investigation of Axial-Flow Fan and Compressor Rotors Designed for Three-Dimensional Flow. TN 1652, July 1948.
- Weinig, F. and Eckert, B.: Measurements on Compressor Blade Lattices. TM 1193, Aug. 1948.
- Mankuta, Harry and Guentert, Donald C.: Investigation of Performance of Single-Stage Axial-Flow Compressor Using NACA 5509-34 Blade Section. RM E8F30, Sept. 1948.
- Huppert, M. C. and MacGregor, Charles: Comparison Between Predicted and Observed Performance of Gas-Turbine Stator Blade Designed for Free-Vortex Flow. TN 1810, April 1949.
- Eckert, E. and von Vietinghoff-Scheel, K.: Experimental Study of Flow Past Turbine Blades. TM 1209, June 1949.

- Cascades Compressors (Cont.)
- Burtt, Jack R.: Investigation of Performance of Typical Inlet Stage of Multistage Axial-Flow Compressor. RM E9E13, July 1949.
- Alpert, Sumner: Design Method for Two-Dimensional Channels for Compressible Flow with Application to High-Solidity Cascades. TN 1931, Aug. 1949.

FANS

(1.4.8)

- Wood, Karl D.: A Variable Speed Fan Dynomometer. TN 26, Dec. 1920.
- Weick, Fred E.: A Comparison of Propeller and Centrifugal Fans for Circulating the Λir in a Wind Tunnel. TN 281, March 1928.
- Betz, A.: Windmills in the Light of Modern Research. TM 474, Aug. 1928.
- Löhner, Kurt: Development of Air-Cooled Engines with Blower Cooling. TM 725, Oct. 1933.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Blowers of Three Designs Operating in Conjunction with a Wing-Duct Cooling System for Radial Engines. ACR, June 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Nose- and Side-Entrance Blower Cooling Systems for Radial Engines. ACR, July 1939.
- Corson, Blake W., Jr.: The Aerodynamics of a Wind-Tunnel Fan. TN 820, Aug. 1941.
- Bell, E. Barton: Test of a Single-Stage Axial-Flow Fan. Rept. 729, 1942.
- Polikovsky, V. and Nevelson, M.: The Performance of a Vaneless Diffuser Fan. TM 1038, Dec. 1942.
- Bell, E. Barton and DeKoster, Lucas J.: Test of a Dual-Rotation Axial-Flow Fan. ARR (WR L-303), Dec. 1942.
- Bell, E. Barton and DeKoster, Lucas J.: The Effect of Solidity, Blade Section, and Contravane Angle on the Characteristics of an Axial-Flow Fan. ARR (WR L-304), Dec. 1942.
- Silverstein, Abe: Review of NACA Investigations on Fans for Engine Cooling. ARR, Jan. 1943.

- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane. II Low-Inlet-Velocity Cowling with
 Axial-Flow Fan and Propeller Cuffs.
 ARR (WR L-243), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane, III Low-Inlet-Velocity Cowling Without
 Fan or Propeller Cuffs, with AxialFlow Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR
 (WR L-508), Jan. 1943.
- Struve, E.: Theoretical Determination of Axial Fan Performance. TM 1042, April 1943.
- Marquardt, R. E.: A Study of Cooling and Exhaust Disposal in Submerged Engine Installations. ACR 3J28, Oct. 1943.
- Ruden, P.: Investigation of Single Stage Axial Fans. TM 1062, April 1944.
- Mutterperl, William: High-Altitude Cooling. VI Axial-Flow Fans and Cooling Power. ARR L4I11e, Sept. 1944.
- Perl, W. and Tucker, M.: A General Representation for Axial-Flow Fans and Turbines. Rept. 814, 1945.
- Bogdonoff, Seymour M. and Bogdonoff, Harriet E.: Blade Design Data for Axial-Flow Fans and Compressors. ACR L5FO7a (WR L-635), July 1945.
- Perl, W. and Epstein, H. T.: Some effects of Compressibility on the Flow Through Fans and Turbines. Rept. 842, 1946.
- Lewis, James P.: Wind-Tunnel Investigation of Icing of a PBM-3D Cooling-Fan Installation. RM E6L03, Dec. 1946.
- Bogdonoff, Seymour M. and Herrig, L. Joseph: Performance of Axial-Flow Fan and Compressor Blades Designed for High Loadings. TN 1201, Feb. 1947.
- Kahane, A.: Charts of Pressure Rise Obtainable with Airfoil-Type Axial-Flow Cooling Fans. TN 1199, March 1947.
- Encke, W.: Investigations on Experimental Impellers for Axial Blowers. TM 1123, April 1947.
- Lewis, James P.: Wind-Tunnel Investigation of Icing of an Engine Cooling-Fan Installation. TN 1246, April 1947.

Fans (Cont.)

- Bogdonoff, Seymour M. and Hess, Eugene E.: Axial-Flow Fan and Compressor Blade Design Data at 52.5° Stagger and Further Verification of Cascade Data by Rotor Tests. TN 1271, April 1947.
- Kahane, A.: Investigation of Axial-Flow Fan and Compressor Rotors Designed for Three-Dimensional Flow. RM L7D02a, May 1947.
- Kahane, A.: Investigation of Axial-Flow Fan and Compressor Rotors Designed for Three-Dimensional Flow. TN 1652, July 1948.
- Mankuta, Harry and Guentert, Donald C.: Investigation of Performance of Single-Stage Axial-Flow Compressor Using NACA 5509-34 Blade Section. RM E8F30, Sept. 1948.
- Schwartz, Ira R.: Investigations of an Annular Diffuser-Fan Combination Handling Rotating Flow. RM L9B28, April 1949.
- Burtt, Jack R.: Investigation of Performance of Typical Inlet Stage of Multistage Axial-Flow Compressor. RM E9E13, July 1949.

TURBINES

(1.4.9)

- Hoff, Wilhelm: Theory of the Ideal Windmill. TN 46, July 1921.
- Munk, Max M.: Wind-Driven Propellers. TM 201, April 1923.
- Betz, A.: Windmills in the Light of Modern Research. TM 474, Aug. 1928.
- Perl, W. and Tucker, M.: A General Representation for Axial-Flow Fans and Turbines. Rept. 814, 1945.
- Perl, W. and Epstein, H. T.: Some Effects of Compressibility on the Flow Through Fans and Turbines. Rept. 842, 1946.
- Queijo, M. J.: Wind-Tunnel Tests of a Modified Koppers Aeromatic Impeller-Generator Combination TED NO. NACA ARR 2901. RM L6K19, Dec.
- Eckert and Korbacher: The Flow Through Axial Turbine Stages of Large Radial Blade Length. TM 1118, April 1947.

- Von Vietinghoff-Scheel, K.: Laboratory Report on the Investigation of the Flow Around Two Turbine-Blade Profiles Using the Interference Method. TM 1171, July 1947.
- Hasenblaus: Pressure Distribution Measurements on a Turbine Motor Blade Passing Behind a Turbine Nozzle Lattice. TM 1173, July 1947.
- Goldstein, Arthur W.: Analysis of the Performance of a Jet Engine from Characteristics of the Components. I - Aerodynamic and Matching Characteristics of the Turbine Component Determined with Cold Air. TN 1459, Oct. 1947.
- Kochendorfer, Fred D. and Nettles, J. Cary: An Analytical Method of Estimating Turbine Performance. RM E8I16, Dec. 1948.
- Wu, Chung-Hua and Wolfenstein, Lincoln: Application of Radial-Equilibrium Condition to Axial-Flow Compressor and Turbine Design. TN 1795, Jan. 1949.
- Huppert, M. C. and MacGregor, Charles: Comparison Between Predicted and Observed Performance of Gas-Turbine Stator Blade Designed for Free-Vortex Flow. TN 1810, April 1949.
- Eckert, E. and von Vietinghoff-Scheel, K.: Experimental Study of Flow Past Turbine Blades. TM 1209, June 1949.
- Alpert, Sumner: Design Method for Two-Dimensional Channels for Compressible Flow with Application to High-Solidity Cascades. TN 1931, Aug. 1949.

BOUNDARY LAYER

(1.4.10)

- Ackeret, J.: Removing Boundary Layer by Suction. TM 395, Jan. 1926.
- Katzoff, S.: The Design of Cooling Ducts with Special Reference to the Boundary Layer at the Inlet. ACR L5C24 (WR·L-321), Dec. 1940.
- Biebel, Williams J.: Low Pressure Boundary Layer Control in Diffusers and Bends. ARR L5C24 (WR L-84), April 1945.
- Freeman, Hugh B.: Boundary Layer Control Tests of Two Wings in the Langley Propeller Research Tunnel. TN 1007, Jan. 1946.

- Boundary Layer (Cont.)
- Pierpont, P. Kenneth: Investigation of Suction-Slot Shapes for Controlling a Turbulent Boundary Layer. TN 1292, June 1947.
- Gourzhienko, G. A.: The Turbulent Flow in Diffusers of Small Divergence Angle. TM 1137, Oct. 1947.
- Nichols, Mark R. and Keith, Arvid L., Jr.: Investigation of a Systematic Group of NACA 1-Series Cowlings with and Without Spinners. RM L8A15, May 1948.

- Schubauer, G. B. and Spangenberg, W. G.: Effect of Screens in Wide-Angle Diffusers. TN 1610, July 1948.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I - Laminar Flows. TM 1217, April 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II - Turbulent Flows. TM 1218, April 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.

Propellers (1.5)

- Toussaint, A.: Drag or Negative Traction of Geared-Down Supporting Propellers in the Downward Vertical Glide of a Helicopter. TN 21, Sept. 1920.
- Senouque, A.: Propeller Tests on Airplanes. TM 120, July 1922.
- Katzmayr, R.: Deflection of Propeller Blades While Running. TM 145, Oct. 1922.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - I. Materials. TN 198, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - II. Method of Construction. TN 199, Aug. 1924.
- Ackeret, J.: Recent Experiments at the Gottingen Aerodynamic Institute. TM 323, July 1925.
- Weick, Fred E.: Propeller Design IV. A Simple Method for Determining the Strength of Propellers. TN 238, June 1926.
- Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt," July 17, 1926, in Dusseldorf, Germany, from "Zeitschrift fur Flugtechnif und Motorluftschiffahrt," July 14, 1926. TM 379, Sept. 1926.
- Pröll, A.: Take-Off Distance for Airplanes. TM 381, Sept. 1926.
- Walker, C. C.: Climbing Efficiency of Aircraft. TM 415, June 1927.
- Weick, Fred E.: Determination of Propeller Deflection by Means of Static Load Tests on Models. TN 275, Jan. 1928.
- Weick, Fred E.: A Comparison of Propeller and Centrifugal Fans for Circulating the Air in a Wind Tunnel. TN 281, March 1928.
- Milner, H. L.: Variable Pitch Propellers. TM 459, April 1928.
- Betz, A.: Windmills in the Light of Modern Research. TM 474, Aug. 1928.
- Betz, A.: Propeller Problems. TM 491, Dec. 1928.

- Driving of Airplane Propellers by One or More Engines Through Shafts and Transmission Gears. Developed by the Junkers Co. MP 24, Aug. 1930.
- Liebers, Fritz: Resonance Vibrations of Aircraft Propellers. TM 657, Feb. 1932.
- Seewald, Friedrich: Determination of Stresses and Deformations of Aircraft Propellers. TM 670, May 1932.
- Lesley, E. P.: Experiments with a Counter-Propeller. TN 453, March 1933.
- Schrenk, Martin: Take-Off and Propeller Thrust. TM 703, April 1933.
- Stowell, E. Z. and Deming, A. F.: Noise from Two-Blade Propellers. Rept. 526, 1935.
- Biermann, David: Relative Efficiencies and Design Charts for Various Engine-Propeller Combinations. ACR, Sept. 1936.
- Panetti, M.: Experimental Apparatus for the Study of Propellers. TM 819, March 1937.
- Ernsthausen, W.: The Source of Propeller Noise. TM 825, May 1937.
- Hartman, Edwin P. and Biermann, David: The Torsional and Bending Deflection of Full-Scale Aluminum-Alloy Propeller Blades under Normal Operating Conditions. Rept. 644, 1938.
- Benson, William M.: Tests of a Contra-Propeller for Aircraft. TN 677, Nov. 1938.
- Rodert, Lewis A.: A Flight Investigation of the Distribution of Ice-Inhibiting Fluids on a Propeller Blade. TN 727, Sept. 1939.
- London, Albert: Principles, Practice, and Progress of Noise Reduction in Airplanes. TN 748, Jan. 1940.
- Biermann, David and Conway, Robert N.:
 Propeller Charts for the Determination of the Rotational Speed for the
 Maximum Ratio of the Propulsive Efficiency to the Specific Fuel Consumption. Rept. 749, 1942.

- Meyer, J.: Propeller Blade Stresses Caused by Periodic Displacement of the Propeller Shaft. TM 1016, June 1942.
- Barlow, William H.: Flight Investigation at High Speeds of the Drag of Three Airfoils and a Circular Cylinder Representing Full Scale Propeller Shanks. Rept. 852, 1946.
- Kuhl, R. and Raab, K.: A Photographic Profile Recorder for Airscrews and Wing Models. TM 1088, June 1946.
- Crigler, John L. and Jaquis, Robert E.: Propeller-Efficiency Charts for Light Airplanes. TN 1338, July 1947.
- Gray, V. H. and Campbell, R. G.: A
 Method for Estimating Heat Requirements for Ice Prevention on GasHeated Hollow Propeller Blades. TN
 1494, Dec. 1947.
- Hammack, Jerome B.: Flight Investigation in Climb and at High Speed of a Two-Blade and a Three-Blade Propeller. TN 1784, Jan. 1949.
- Kruger, W.: On Wind Tunnel Tests and Computations Concerning the Problem of Shrouded Propellers. TM 1202, Feb. 1949.
- Ginzel, F.: Calculation of Counterrotating Propellers. TM 1208, March 1949.

THEORY

(1.5.1)

- Zahm, A. F.: Period Stresses in Gyroscopic Bodies, with Applications to Air Screws. Rept. 19, 1917.
- De Bothezat, George: The General Theory of Blade Screws. Rept. 29, 1919.
- Warner, Edward P.; Norton, F. H. and Hebbert, C. M.: The Design of Wind Tunnels and Wind Tunnel Propellers. Rept. 73, 1919.
- De Bothezat, George: An Introduction to the Study of the Laws of Air Resistance of Aerofoils. Rept. 28, 1920.
- Froude, W.: On the Elementary Relation Between Pitch, Slip, and Propulsive Efficiency. TM 1, 1920.
- Warner, Edward P.: The Problem of the Helicopter. TN 4, May 1920.

- Betz, A.: Development of the Inflow Theory of the Propeller. TN 24, Nov. 1920.
- Norton, F. H. and Warner, Edward P.: Design of Wind Tunnels and Wind-Tunnel Propellers, II. Rept. 98, 1921.
- Rateau, A.: Resume of the Theory of Naval and Aerial Propulsive Propellers and of Airplanes in Rectilinear Flight. TM 17, April 1921.
- Hoff, Wilhelm: Theory of the Ideal Windmill. TN 46, July 1921.
- Borck, Hermann: Dependence of Propeller Efficiency on Angle of Attack of Propeller Blade. TM 54, Dec. 1921.
- Betz, A.: The Theory of the Screw Propeller. TN 83, Feb. 1922.
- Munk, Max M.: Notes on Propeller Design. The Energy Losses of the Propeller I. TN 91, April 1922.
- Munk, Max M.: Notes on Propeller Design II: The Distribution of Thrust over a Propeller Blade. TN 94, April 1922.
- Margoulis, W.: Propeller Theory of Professor Joukowski and His Pupils. TM 79, April 1922.
- Munk, Max M.: Notes on Propeller Design III. The Aerodynamical Equations of the Propeller Blade Elements. TN 95, May 1922.
- Munk, Max M.: Notes on Propeller Design IV: General Proceeding in Design. TN 96, May 1922.
- Diehl, Walter S.: The General Efficiency Curve for Air Propellers. Rept. 168, 1923.
- Munk, Max M.: Analysis of W. F. Durand's and E. P. Lesley's Propeller Tests. Rept. 175, 1923.
- Achenbach, W.: Variation in the Number of Revolutions of Air Propellers. TN 131, March 1923.
- Munk, Max M.: Wind Driven-Propellers. TM 201, April 1923.
- Pistolesi, Enrico: Variable Pitch Propeller. TM 216, July 1923.
- Toussaint, A.: Lecture on Aerodynamics. TM 227, Sept. 1923.
- Munk, Max M.: Reduction in Efficiency of Propellers due to Slipstream. TN 170, Dec. 1923.

- Theory (Cont.)
- Munk, Max M.: The Analysis of Free Flight Propeller Tests and Its Application to Design. Rept. 183, 1924.
- Durand, William F. and Lesley, E. P.: Comparison of Model Propeller Tests with Airfoil Theory. Rept. 196, 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - III. General Description of the Design. TN 200, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - IV. Technical Methods of Design. TN 201, Sept. 1924.
- Ames, Joseph S.: A Résumé of the Advances in Theoretical Aeronautics Made by Max M. Munk. Rept. 213, 1925.
- Klemin, Alexander: An Introduction to the Helicopter. TM 340, 1925.
- Weick, Fred E.: Simplified Propeller Design for Low-Powered Airplanes. TN 212, Jan. 1925.
- Sachse, H.: Kirsten-Boeing Propeller. TM 351, Feb. 1926.
- Weick, Fred E.: Propeller Design. I -Practical Application of the Blade Element Theory. TN 235, May 1926.
- Weick, Fred E.: Propeller Design. II -Extension of Test Data on a Family of Model Propellers by Means of the Modified Blade Element Theory. TN 236, May 1926.
- Weick, Fred E.: Propeller Design. III -A Simple System Based on Model Propeller Test Data. TN 237, May 1926.
- Bienen, Theodor: Calculating Thrust Distribution and Efficiency of Air Propellers. TM 444, Dec. 1927.
- Betz, A.: Windmills in the Light of Modern Research. TM 474, Aug. 1928.
- Betz, A.: Considerations on Propeller Efficiency. TM 481, Sept. 1928.
- Troller, Theodor: Influence of Fuselage on Propeller Design. TM 492, Dec. 1928.
- De Caria, Ugo: Counter-Propellers. TM 587, Oct. 1930.
- Helmbold, H. B.: Goldstein's Solution of the Problem of the Aircraft Propeller with a Finite Number of Blades. TM 652, Dec. 1931.

- Stickle, George W.: Measurement of the Differential and Total Thrust and Torque of Six Full-Scale Adjustable-Pitch Propellers. Rept. 421, 1932.
- Bennett, J. A. J.: Vertical Descent of the Autogiro. TM 673, June 1932.
- Misztal, Franz: The Problem of the Propeller in Yaw with Special Reference to Airplane Stability. TM 696, Jan. 1933.
- Hartman, Edwin P.: A'Method of Calculating the Performance of Controllable Propellers with Sample Computations. TN 484, Jan. 1934.
- Schrenk, Martin: Aerodynamic Principles of the Direct Lifting Propeller. TM 733, Jan. 1934.
- Wheatley, John B.: The Aerodynamic Analysis of the Gyroplane Rotating-Wing System. TN 492, March 1934.
- Wieselsberger, C.: Contribution to the Mutual Interference of Wing and Propeller. TM 754, Sept. 1934.
- Deming, A. F.: Noise from Propellers with Symmetrical Sections at Zero Blade Angle. TN 605, July 1937.
- Betz, A.: The Ground Effect on Lifting Propellers. TM 836, Aug. 1937.
- Knight, Montgomery and Hefner, Ralph A.: Static Thrust Analysis of the Lifting Airscrew. TN 626, Dec. 1937.
- Lösch, F.: Calculation of the Induced Efficiency of Heavily Loaded Propellers Having Infinite Number of Blades. Kramer, K. N.: The Induced Efficiency of Optimum Propellers Having a Finite Number of Blades. Bock, G. and Nikodemus, R.: Prospects of Propeller Drive for High Flying Speeds. TM 884, Jan. 1939.
- Lesley, E. P.: Propeller Tests To Determine the Effect of Number of Blades at Two Typical Solidities. TN 698, April 1939.
- Betz, Albert: The Theory of Contra-Vanes Applied to the Propeller. TM 909, Sept. 1939.
- Hartman, Edwin P. and Biermann, David: Static Thrust and Power Characteristics of Six Full-Scale Propellers. Rept. 684, 1940.
- Deming, Arthur F.: Propeller Rotation Noise Due to Torque and Thrust. TN 747, Jan. 1940.

Theory (Cont.)

- Reissner, Hans: A Generalized Vortex Theory of the Screw Propeller and Its Application. TN 750, Feb. 1940.
- Stickle, George W. and Crigler, John L.: Propeller Analysis from Experimental Data. Rept. 712, 1941.
- Corson, Blake W.: The Aerodynamics of a Wind-Tunnel Fan. TN 820, Aug. 1941.
- Luoma, Arvo A.: Critical Speeds and Profile Drag of the Inboard Sections of a Conventional Propeller. ARR (WR L-369), Sept. 1941.
- Biermann, David and Conway, Robert N.: The Selection of Propellers for High Thrust at Low Airspeed. ARR (WR L-483), Oct. 1941.
- Knight, Montgomery and Hefner, Ralph A.: Analysis of Ground Effect on the Lifting Airscrew. TN 835, Dec. 1941.
- Hoff, Wilhelm: Contribution to the Ideal Efficiency of Screw Propellers. TM 1002, Jan. 1942.
- Biermann, David and Conway, Robert N.:
 Propeller Charts for the Determination of the Rotational Speed for the Maximum Ratio of the Propulsive Efficiency to the Specific Fuel Consumption. Rept. 749, 1942.
- Biermann, David and Pepper, Edward: Tests of Several Propeller Cuffs Designed for Different Loadings. ARR, Feb. 1942.
- Crigler, John L. and Talkin, Herbert W.:
 Propeller Selection from Aerodynamic
 Considerations. ACR (WR L-363),
 July 1942.
- Hartman, Edwin P. and Feldman, Lewis: Aerodynamic Problems in the Design of Efficient Propellers. ACR (WR L-753), Aug. 1942.
- Naiman, Irven: Method of Calculating Performance of Dual-Rotating Propellers from Airfoil Characteristics. ARR 3E24 (WR L-330), May 1943.
- Ribner, Herbert S.: Proposal for a Propeller Side-Force Factor. RB 3L02 (WR L-336), Dec. 1943.
- Meyer, J.: The Coupling of Flexural Propeller Vibrations with the Torsional Crankshaft Vibrations. TM 1051, Dec. 1943.

- Theodorsen, Theodore: The Theory of Propellers. I - Determination of the Circulation Function and the Mass Coefficient for Dual-Rotating Propellers. Rept. 775, 1944.
- Theodorsen, Theodore: The Theory of Propellers. II - Method for Calculating the Axial Interference Velocity. Rept. 776, 1944.
- Theodorsen, Theodore: The Theory of Propellers. III - The Slipstream Contraction with Numerical Values for Two-Blade and Four-Blade Propellers. Rept. 777, 1944.
- Theodorsen, Theodore: The Theory of Propellers. IV - Thrust, Energy, and Efficiency Formulas for Single- and Dual-Rotating Propellers with Ideal Circulation Distribution. Rept. 778, 1944.
- Crigler, John L.: Comparison of Calculated and Experimental Propeller Characteristics for Four-, Six-, and Eight-Blade Single-Rotating Propellers. ACR 4B04 (WR L-362), Feb. 1944.
- Corson, Blake W., Jr. and Miller, Mason F.: Considerations of Wake-Excited Vibratory Stress in a Pusher Propeller. ACR L4B28 (WR L-146), Feb. 1944.
- Crigler, John L. and Talkin, Herbert W.: Charts for Determining Propeller Efficiency. ACR L4I29 (WR L-144), Sept. 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- Ribner, Herbert S.: Formulas for Propellers in Yaw and Charts of the Side-Force Derivative. Rept. 819, 1945.
- Ribner, Herbert S.: Propellers in Yaw. Rept. 820, 1945.
- Crigler, John L.: The Effect of Trailing-Edge Extension Flaps on Propeller Characteristics. ACR L5A11 (WR L-165), Jan. 1945.
- Poliakhov, N.: The Minimum Energy Loss Propeller. TM 1067, March 1945.
- Coleman, Robert P.; Feingold, Arnold M. and Stempin, Carl W.: Evaluation of the Induced-Velocity Field of an Idealized Helicopter Rotor. ARR L5E10 (WR L-126), June 1945.

Theory (Cont.)

- Gardner, Clifford S. and LaHatte, James A., Jr.: Determination of Induced Velocity in Front of an Inclined Propeller by a Magnetic-Analogy Method. ARR L6A05b (WR L-154), Feb. 1946.
- Reid, Elliott G.: Wake Studies of Eight Model Propellers. TN 1040, July 1946.
- Corson, Blake W., Jr. and Maynard, Julian D.: Investigation of the Effect of a Tip Modification and Thermal De-Icing Air Flow on Propeller Performance. TN 1111, July 1946.
- Corson, Blake W., Jr. and Maynard, Julian D.: Analysis of Propeller Efficiency Losses Associated with Heated-Air Thermal De-Icing. TN 1112, July 1946.
- Gilman, Jean, Jr.: Wind-Tunnel Tests and Analysis of Three 10-Foot-Diameter Three-Blade Tractor Propellers Differing in Pitch Distribution. ARR L6E22, Aug. 1946.
- Hicks, Chester W. and Hubbard, Harvey H.: Comparison of Sound Emission from Two-Blade, Four-Blade, and Seven-Blade Propellers. TN 1354, July 1947.
- Hubbard, Harvey H. and Regier, Arthur A.: Propeller-Loudness Charts for Light Airplanes. TN 1358, July 1947.
- Regier, Arthur A. and Hubbard, Harvey H.: Factors Affecting the Design of Quiet Propellers. RM L7H05, Sept. 1947.
- Regenscheit, B.: Venturi Tube with Varying Mass Flow. TM 1191. March 1948.
- Gilman, Jean, Jr.: Wind-Tunnel Tests and Analysis of Two 10-Foot-Diameter Six-Blade Dual-Rotating Tractor Propellers Differing in Pitch Distribution. TN 1634, June 1948.
- Hubbard, Harvey H.: Sound from Dual-Rotating and Multiple Single-Rotating Propellers. TN 1654, July 1948.
- Crigler, John L.: Application of Theodorsen's Theory to Propeller Design, RM L8F30, July 1948.
- Gutin, L.: On the Sound Field of a Rotating Propeller. TM 1195, Oct. 1948.
- Vogeley, A. W.: Calculation of the Effect of Thrust-Axis Inclination on Propeller Disk Loading and Comparison with Flight Measurements. TN 1721, Oct. 1948.

- Hammack, Jerome B.: Flight Investigation in Climb and at High Speed of a Two-Blade and a Three-Blade Propeller. TN 1784, Jan. 1949.
- Kruger, W.: On Wind Tunnel Tests and Computations Concerning the Problem of Shrouded Propellers. TM 1202, Feb. 1949.
- Ginzel, F.: Calculation of Counterrotating Propellers. TM 1208, March 1949.
- Hubbard, Harvey H. and Regier, Arthur A.: Free-Space Oscillating Pressures Near the Tips of Rotating Propellers. TN 1870, April 1949.

DESIGN VARIABLES

(1.5.2)

- Diehl, Walter S.: The Application of Propeller Test Data to Design and Performance Calculations. Rept. 186, 1924.
- Driggs, Ivan H.: The Light Airplane.
 Brief Review of the Results Obtained in the Development of Light Airplanes
 I. Modern Theoretical Aerodynamics as Applied to Light Airplane Design II. TM 311, April 1925.
- Weick, Fred E.: Full-Scale Tests of Wood Propellers on a VE-7 Airplane in the Propeller Research Tunnel. Rept. 301, 1929.
- Stickle, George W.: Measurement of the Differential and Total Thrust and Torque of Six Full-Scale Adjustable-Pitch Propellers. Rept. 421, 1932.
- Knight, Montgomery and Hefner, Ralph A.: Analysis of Ground Effect on the Lifting Airscrew. TN 835, Dec. 1941.
- Hedrick, William S. and Douglass, William M.: An Experimental Investigation of the Thrust and Torque Produced by Propellers Used as Aerodynamic Brakes. ARR 4H26 (WR A-27), Aug. 1944.
- Gardner, John J.: Effect of Blade Loading on the Climb and High-Speed Performance of a Three-Blade Hamilton Standard No. 6507A-2 Propeller on a Republic P-47D Airplane. MR L5G09a (WR L-594), July 1945.
- Theodorsen, Theodore and Regier, Arthur A.: The Problem of Noise Reduction with Reference to Light Airplanes. TN 1145, Aug. 1946.
- Crigler, John L. and Jaquis, Robert E.: Propeller-Efficiency Charts for Light Airplanes. TN 1338, July 1947.

- Design Variables (Cont.)
- Regier, Arthur A. and Hubbard, Harvey H.: Factors Affecting the Design of Quiet Propellers. RM L7H05, July 1947.
- Regier, Arthur A. and Hubbard, Harvey H.: Factors Affecting the Design of Quiet Propellers. RM L7H05, Sept. 1947.
- Platt, Robert J., Jr.: Static Tests of a Shrouded and an Unshrouded Propeller. RM L7H25, Feb. 1948.
- Hammack, Jerome B.: Flight Investigation in Climb and at High Speed of a Two-Blade and a Three-Blade Propeller. TN 1784, Jan. 1949.

BLADE SECTIONS (1.5.2.1)

- Durand, William F.: Experimental Research on Air Propellers. Rept. 14, 1917.
- Durand, Willaim F. and Lesley, E. P.: Experimental Research on Air Propellers - II. Rept. 30, 1920.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers III. Rept. 64, 1920.
- Caldwell, F. W. and Fales, E. N.: Wind-Tunnel Studies in Aerodynamic Phenomena at High Speed. Rept. 83, 1920.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers IV. Rept. 109, 1921.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers V. Rept. 141, 1922.
- Munk, Max M.: Analysis of W. F. Durand's and E. P. Lesley's Propeller Tests. Rept. 175, 1923.
- Durand, William F. and Lesley, E. P.: Comparison of Model Propeller Tests with Airfoil Theory. Rept. 196, 1924.
- Durand, W. F.: Tests on Thirteen Navy Type Model Propellers. Rept. 237, 1926.
- Weick, Fred E.: Navy Propeller Section Characteristics as Used in Propeller Design. TN 244, Aug. 1926.
- Lesley, E. P.: Test of a Model Propeller with Symmetrical Blade Sections. TN 246, Sept. 1926.

- Jacobs, Eastman N.: Characteristics of Propeller Sections Tested in the Variable Density Wind Tunnel. Rept. 259, 1927.
- Crowley, J. W., Jr. and Mixson, R. E.: Characteristics of Five Propellers in Flight. Rept. 292, 1928.
- Weick, Fred E.: Full-Scale Tests on a Thin Metal Propeller at Various Tip Speeds. Rept 302, 1928.
- Wood, Donald H.: Full-Scale Tests of Metal Propellers at High Tip Speeds. Rept. 375, 1931.
- Freeman, Hugh B.: Comparison of Full-Scale Propellers Having R.A.F.-6 and Clark Y Airfoil Sections. Rept. 378, 1931.
- Diehl, Walter S.: Static Thrust of Airplane Propellers. Rept. 447, 1932.
- Stack, John: The NACA High-Speed Wind Tunnel and Tests of Six Propeller Sections. Rept. 463, 1933.
- Stack, John and von Doenhoff, Albert E.: Tests of 16 Related Airfoils at High Speeds. Rept. 492, 1934.
- Hartman, Edwin P.: Considerations of the Take-Off Problem. TN 557, Feb.
- Biermann, David and Hartmann, Edwin P.:
 The Effect of Compressibility on
 Eight Full-Scale Propellers Operating in the Take-Off and Climbing
 Range. Rept. 639, 1938.
- Hartman, Edwin P. and Biermann, David: The Aerodynamic Characteristics of Full-Scale Propellers Having 2, 3, and 4 Blades of Clark Y and R.A.F. 6 Airfoil Sections. Rept. 640, 1938.
- Hartman, Edwin P. and Biermann, David: The Negative Thrust and Torque of Several Full-Scale Propellers and Their Application to Various Flight Problems. Rept. 641, 1938.
- Biermann, David and Hartman, Edwin P.:
 Tests of Five Full-Scale Propellers
 in the Presence of a Radial and a
 Liquid-Cooled Engine Nacelle, Including Tests of Two Spinners.
 Rept. 642, 1938.
- Stack, John and Lindsey, W. F.: Tests of N-85, N-86, and N-87 Airfoil Sections in the 11-Inch High-Speed Wind Tunnel. TN 665, Sept. 1938.
- Deming, A. F.: Noise from Propellers with Symmetrical Sections at Zero Blade Angle - II. TN 679, Dec. 1938.

- Blade Sections Design Variables (Cont.)
- Biermann, David and Hartman, Edwin P.: The Aerodynamic Characteristics of Six Full-Scale Propellers Having Different Airfoil Sections. Rept. 650, 1939.
- Hartman, Edwin P. and Biermann, David: Static Thrust and Power Characteristics of Six Full-Scale Propellers. Rept. 684, 1940.
- Biermann, David; Hartman, Edwin P. and Pepper, Edward: Full-Scale Tests of Several Propellers Equipped with Spinners, Cuffs, Airfoil and Round Shanks, and NACA 16-Series Sections. ACR, Oct. 1940.
- Gray, W. H.: Wind-Tunnel Tests of Two Hamilton Standard Propellers Embodying Clark Y and NACA 16-Series Blade Sections. MR (WR L-530), Aug. 1941.
- Corson, Blake W., Jr. and Mastrocola, Nicholas: Static Characteristics of Curtiss Propellers Having Different Blade Sections. MR (WR L-568), Aug. 1941.
- Gray, W. H.: Wind-Tunnel Tests of Four Curtiss Propellers Embodying Different Blade Sections. MR (WR L-569), Aug. 1941.
- Corson, Blake W., Jr. and Mastrocola, Nicholas: Static Characteristics of Hamilton Standard Propellers Having Clark Y and NACA 16-Series Blade Sections. MR (WR L-529), Aug. 1941.
- Luoma, Arvo A.: Critical Speeds and Profile Drag of the Inboard Sections of a Conventional Propeller. ARR (WR L-369), Sept. 1941.
- Cordes, G.: The Design of Propeller Blade Roots. TM 1001, Jan. 1942.
- McHugh, James G. and Pepper, Edward: The Characteristics of Two Model Six-Blade Counterrotating Pusher Propellers of Conventional and Improved Aerodynamic Design. ARR (WR L-404), June 1942.
- Conway, Robert N.: Miscellaneous Information on the Effect of Spinner Cut-Outs on Propeller Performance. ARR, July 1942.
- Crigler, John L. and Talkin, Herbert W.: Propeller Selection from Aerodynamic Considerations. ACR (WR L-363), July 1942.

- Hartman, Edwin P. and Feldman, Lewis: Aerodynamic Problems in the Design of Efficient Propellers. ACR (WR L-753), Aug. 1942.
- Biermann, David; Gray, W. H. and Maynard, Julian D.: Wind-Tunnel Tests of Single- and Dual-Rotating Tractor Propellers of Large Blade Width. ARR (WR L-385), Sept. 1942.
- Bell, E. Barton and DeKoster, Lucas J.: The Effect of Solidity, Blade Section, and Contravane Angle on the Characteristics of an Axial-Flow Fan. ARR (WR L-304), Dec. 1942.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane. II Low-Inlet-Velocity Cowling with
 Axial-Flow Fan and Propeller Cuffs.
 ARR (WR L-243), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds
 Cowlings on the XP-42 Airplane. IV
 High-Inlet-Velocity Cowling Tested
 in Climb with and Without Propeller
 Cuffs and in High-Speed Level Flight
 Without Propeller Cuffs. ARR (WR
 L-285), Jan. 1943.
- Bailey, F. J., Jr. and Johnston, J. Ford:
 Flight Investigation of NACA DS
 Cowlings on the XP-42 Airplane. I High-Inlet-Velocity Cowling with
 Propeller Cuffs Tested in High-Speed
 Level Flight. ARR (WR L-383), Jan.
 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds
 Cowlings on the XP-42 Airplane III Low-Inlet-Velocity Cowling Without
 Fan or Propeller Cuffs, with AxialFlow Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR
 (WR L-508), Jan. 1943.
- Naiman, Irven: Method of Calculating Performance of Dual-Rotating Propellers from Airfoil Characteristics. ARR 3E24 (WR L-330), May 1943.
- Vogeley, A. W.: Flight Measurements of Compressibility Effects on a Two-Blade Thin Clark Y Propeller. ACR 3K06, Nov. 1943.
- Crigler, John L.: Comparison of Calculated and Experimental Propeller Characteristics for Four-, Six-, and Eight-Blade Single-Rotating Propellers. ACR 4B04 (WR L-362), Feb. 1944.

- Blade Sections Design Variables (Cont.)
- Gustafson, F. B.: Effect on Helicopter Performance of Modifications in Profile-Drag Characteristics of Rotor-Blade Airfoil Sections. ACR L4H05 (WR L-26), Aug. 1944.
- Theodorsen, Theodore and Stickle, George W.: Effect of a Trailing-Edge Extension on the Characteristics of a Propeller Section. ACR L4I21 (WR L-637), Sept. 1944.
- Crigler, John L. and Talkin, Herbert W.: Charts for Determining Propeller Efficiency. ACR L4I29 (WR L-144), Sept. 1944.
- Reid, Elliott G.: Studies of Blade Shank Form and Pitch Distribution for Constant-Speed Propellers. TN 947, Jan. 1945.
- Cleary, Harold E.: Effects of Compressibility on Maximum Lift Coefficients for Six Propeller Airfoils. ACR L4L21a (WR L-514), Jan. 1945.
- Maynard, Julian D. and Evans, Albert J.: Tests of Four Full-Scale Propellers to Determine the Effect of Trailing-Edge Extensions on Propeller Aerodynamic Characteristics. MR L5G10 (WR L-582), July 1945.
- Boxer, Emanuel: Wind-Tunnel Investigation of Alternative Propellers Operating Behind Deflected Wing Flaps for the XB-36 Airplane. MR L5K12a (WR L-533), Dec. 1945.
- Gasich, Welko E.: Experimental Verification of Two Methods for Computing the Take-Off Ground Run of Propeller-Driven Aircraft. TN 1258, June 1947.
- Hammack, Jerome B.: Investigation of Thrust Losses Due To Shanks of a Flared-Shank Two-Blade Propeller on a Slender-Nose Airplane. TN 1414, Aug. 1947.
- Daley, Bernard N. and Humphreys, Milton D.: Effects of Compressibility on the Flow Past Thick Airfoil Sections. TN 1657, July 1948.
- Lindsey, W. F.; Stevenson, D. B. and Daley, Bernard N.: Aerodynamic Characteristics of 24 NACA 16-Series Airfoils at Mach Numbers Between 0.3 and 0.8. TN 1546, Sept. 1948.

SOLIDITY (1.5.2.2)

Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers - III. Rept. 64, 1920.

- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers IV. Rept. 109, 1921.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers V. Rept. 141, 1922.
- Diehl, Walter S.: Relative Efficiency of Direct and Geared Drive Propellers. Rept. 178, 1923.
- Dietsius, H.: The Air Propeller, Its Strength and Correct Shape. TN 127, Feb. 1923.
- Munk, Max M.: Analysis of Dr. Schraffran's Propeller Model Tests. TN 158, Sept. 1923.
- Munk, Max M.: Model Tests on the Economy and Effectiveness of Helicopter Propellers. TN 221, July 1925.
- Durand, W. F.: Tests on Thirteen Navy Type Model Propellers. Rept. 237, 1926.
- Lesley, E. P.: Report on Tests of Metal Model Propellers in Combination with a Model VE-7 Airplane. TN 245, Aug. 1926.
- Diehl, Walter S.: Static Thrust of Airplane Propellers. Rept. 447, 1932.
- Knight, Montgomery and Hefner, Ralph A.: Static Thrust Analysis of the Lifting Airscrew. TN 626, Dec. 1937.
- Biermann, David and Hartman, Edwin P.: The Effect of Compressibility on Eight Full-Scale Propellers Operating in the Take-Off and Climbing Range. Rept. 639, 1938.
- Hartman, Edwin P. and Biermann, David: The Aerodynamic Characteristics of Full-Scale Propellers Having 2, 3, and 4 Blades of Clark Y and R.A.F. 6 Airfoil Sections. Rept. 640, 1938.
- Hartman, Edwin P. and Biermann, David: The Negative Thrust and Torque of Several Full-Scale Propellers and Their Application to Various Flight Problems. Rept. 641, 1938.
- Hartman, Edwin P. and Biermann, David: The Aerodynamic Characteristics of Four Full-Scale Propellers Having Different Plan Forms. Rept. 643, 1938.
- Lesley, E. P.: Tandem Air Propellers. TN 689, Feb. 1939.
- Lesley, E. P.: Propeller Tests to Determine the Effect of Number of Blades at Two Typical Solidities. TN 698, April 1939.

- Solidity Design Variables (Cont.)
- Hartman, Edwin P. and Biermann, David: Static Thrust and Power Characteristics of Six Full-Scale Propellers. Rept. 684, 1940.
- Reissner, Hans: A Generalized Vortex Theory of the Screw Propeller and its Application. TN 750, Feb. 1940.
- Stickle, George W. and Crigler, John L.: Propeller Analysis From Experimental Data. Rept. 712, 1941.
- Lesley, E. P.: Tandem Air Propellers II. TN 822, Aug. 1941.
- Reid, Elliott G.: The Effects of Hub Drag, Solidity, Dual Rotation, and Number of Blades upon the Efficiency of High-Pitch Propellers. ACR (WR W-84), Oct. 1941.
- Biermann, David and Conway, Robert N.: The Selection of Propellers for High Thrust at Low Airspeed. ARR (WR L-483), Oct. 1941.
- Biermann, David and Gray, W. H.: Wind-Tunnel Tests of Eight-Blade Singleand Dual-Rotating Propellers in the Tractor Position. ARR (WR L-384), Nov. 1941.
- Biermann, David and Hartman, Edwin P.: Wind-Tunnel Tests of Four- and Six-Blade Single- and Dual-Rotating Tractor Propellers. Rept. 747, 1942.
- Biermann, David and Gray, W. H.: Wind Tunnel Tests of Single- and Dual-Rotating Pusher Propellers Having from Three to Eight Blades. ARR (WR L-359) Feb. 1942.
- Biermann, David and Conway, Robert N.: Wind-Tunnel Tests of Propellers Having a Biplane Arrangement of the Blades. ARR, March 1942.
- Runckel, Jack F.: The Effect of Pitch on Force and Moment Characteristics of Full-Scale Propellers of Five Solidities. ARR (WR L-446), June 1942.
- Crigler, John L. and Talkin, Herbert W.:
 Propeller Selection from Aerodynamic
 Considerations. ACR (WR L-363),
 July 1942.
- Hartman, Edwin P. and Feldman, Lewis: Aerodynamic Problems in the Design of Efficient Propellers. ACR (WR L-753), Aug. 1942.
- Biermann, David; Gray, W. H. and Maynard, Julian D.: Wind-Tunnel Tests of Singleand Dual-Rotating Tractor Propellers of Large Blade Width. ARR (WR L-385), Sept. 1942.

- Bell, E. Barton and DeKoster, Lucas J.: The Effect of Solidity, Blade Section, and Contravane Angle on the Characteristics of an Axial-Flow Fan. ARR (WR L-304), Dec. 1942.
- Gray, W. H.: Wind-Tunnel Tests of Singleand Dual- Rotating Tractor Propellers at Low Blade Angles and of Two- and Three-Blade Tractor Propellers at Blade Angles Up to 65°. ARR (WR L-316), Feb. 1943.
- Desmond, Gerald L. and Freitag, Robert F.: Working Charts for the Computation of Propeller Thrust Throughout the Take-Off Range. ARR 3G26 (WR W-100), July 1943.
- Gray, W. H. and Mastrocola, Nicholas: Representative Operating Charts of Propellers Tested in the NACA 20-Foot Propeller-Research Tunnel. ARR 3I25 (WR L-286), Sept. 1943.
- Vogeley, A. W.: Flight Measurements of Compressibility Effects on a Two-Blade Thin Clark Y Propeller. ACR 3K06, Nov. 1943.
- Theodorsen, Theodore: The Theory of Propellers III - The Slipstream Contraction with Numerical Values for Two-Blade and Four-Blade Propellers. Rept. 777, 1944.
- Stack, John; Draley, Eugene C.; Delano, James B. and Feldman, Lewis: Investigation of Two-Blade Propellers at High Forward Speeds in the NACA 8-Foot High-Speed Tunnel. I - Effects of Compressibility. NACA 4-309-03 Blade. ACR 4A10, Jan. 1944.
- Crigler, John L.: Comparison of Calculated and Experimental Propeller Characteristics for Four-, Six-, and Eight-Blade Single-Rotating Propellers. ACR 4B04 (WR L-362), Feb. 1944.
- Gray, W. H.: Wind-Tunnel Tests of Dual-Rotating Propellers with Systematic Differences in Number of Blades, Blade Setting, and Rotational Speed of Front and Rear Propellers. ARR L4E22 (WR L-80), May 1944.
- Theodorsen, Theodore and Stickle, George W.: Effect of a Trailing-Edge Extension on the Characteristics of a Propeller Section. ACR L4I21 (WR L-637), Sept. 1944.
- Crigler, John L. and Talkin, Herbert W.: Charts for Determining Propeller Efficiency. ACR L4I29 (WR L-144), Sept. 1944.

- Solidity Design Variables (Cont.)
- Ribner, Herbert S.: Formulas for Propellers in Yaw and Charts of the Side-Force Derivative. Rept. 819, 1945.
- Reid, Elliott G.: Studies of Blade Shank Form and Pitch Distribution for Constant-Speed Propellers. TN 947, Jan. 1945.
- Crigler, John L.: The Effect of Trailing-Edge Extension Flaps on Propeller Characteristics. ACR L5A11 (WR L-165), Jan. 1945.
- Gray, W. H. and Gilman, Jean, Jr.: Characteristics of Several Single- and Dual-Rotating Propellers in Negative Thrust. MR L5C07 (WR L-634), March 1945.
- Maynard, Julian D. and Evans, Albert J.:
 Tests of Four Full-Scale Propellers
 to Determine The Effect of TrailingEdge Extensions on Propeller Aerodynamic Characteristics. MR L5G10
 (WR L-582), July 1945.
- Reid, Elliott G.: Wake Studies of Eight Model Propellers. TN 1040, July 1946.
- Crigler, John L. and Jaquis, Robert E.: Propeller-Efficiency Charts for Light Airplanes. TN 1338, July 1947.
- Hicks, Chester W. and Hubbard, Harvey H.: Comparison of Sound Emission from Two-Blade, Four-Blade, and Seven-Blade Propellers. TN 1354, July 1947.
- Vogeley, A. W.: Sound-Level Measurements of a Light Airplane Modified To Reduce Noise Reaching the Ground. TN 1647, July 1948.
- Kruger, W.: On Wind Tunnel Tests and Computations Concerning the Problem of Shrouded Propellers. TM 1202, Feb. 1949.
- Reid, Elliott G.: The Influence of Blade-Width Distribution on Propeller Characteristics. TN 1834, March 1949.

PITCH DISTRIBUTION (1.5.2.3)

- Durand, William F.: Experimental Research on Air Propellers. Rept. 14, 1917.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers, III. Rept. 64, 1920.

- Froude, W.: On the Elementary Relation Between Pitch, Slip, and Propulsive Efficiency. TM 1, 1920.
- Variable Pitch Propellers Translated from L'Aeronautique, Sept. 30, 1920. TM 2, Nov. 1920.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers, IV. Rept. 109, 1921.
- Lame, M.: Abstracts from the French Technical Press. Study of the Resistance Offered by Propellers Rotating on an Airstream. TM 21, April 1921.
- Borck, Hermann: Dependence of Propeller Efficiency on Angle of Attach of Propeller Blade. TM 54, Dec. 1921.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers, V. Rept. 141, 1922.
- Diehl, Walter S.: The General Efficiency Curve for Air Propellers. Rept. 168, 1923.
- Munk, Max M.: Analysis of W. F.
 Durand's and E. P. Lesley's Propeller
 Tests. Rept. 175, 1923.
- Diehl, Walter S.: Relative Efficiency of Direct and Geared Drive Propellers. Rept. 178, 1923.
- Pistolesi, Enrico: Variable Pitch Propeller. TM 216, July 1923.
- Munk, Max M.: Analysis of Dr. Schaffran's Propeller Model Tests. TN 158, Sept. 1923.
- Weick, Fred E.: Simplified Propeller Design for Low-Powered Airplanes. TN 212, Jan. 1925.
- Munk, Max M.: Model Tests on the Economy and Effectiveness of Helicopter Propellers. TN 221, July 1925.
- Durand, W. F.: Tests on Thirteen Navy Type Model Propellers. Rept. 237, 1926.
- Crowley, J. W., Jr. and Mixson, R. E.: Characteristics of Five Propellers in Flight. Rept. 292, 1928.
- Lesley, E. P. and Reid, Elliott G.: Tests of Five Metal Model Propellers with Various Fitch Distributions in a Free Wind Stream and in Combination with a Model VE-7 Fuselage. Rept. 326, 1928.

- Pitch Distribution Design Variables (Cont.)
- Weick, Fred E.: Full-Scale Wind-Tunnel Tests of a Series of Metal Propellers on a VE-7 Airplane. Rept. 306, 1929.
- Lesley, E. P.: Test of an Adjustable Pitch Model Propeller at Four Blade Settings. TN 333, Feb. 1930.
- Freeman, Hugh B.: Comparison of Full-Scale Propellers Having R.A.F.-6 and Clark Y Airfoil Sections. Rept. 378, 1931.
- Diehl, Walter S.: Static Thrust of Airplane Propellers. Rept. 447, 1932.
- Hartman, Edwin P.: Negative Thrust and Torque Characteristics of an Adjustable-Pitch Metal Propellers. Rept. 464, 1933.
- Hartman, Edwin P.: Working Charts for the Determination of Propeller Thrust at Various Air Speeds. Rept. 481, 1934.
- Hartman, Edwin P.: A Method of Calculating the Performance of Controllable Propellers with Sample Computations. TN 484, Jan. 1934.
- Windler, Ray: Tests of a Wing-Nacelle-Propeller Combination at Several Pitch Settings up to 42°. Rept. 564, 1936.
- Theodorsen, Theodore; Stickle, George W. and Brevoort, M. J.: Characteristics of Six Propellers Including the High-Speed Range. Rept. 594, 1937.
- Rhode, Richard V. and Pearson, Henry A.: Flight Tests of the Drag and Torque of the Propeller in Terminal-Velocity Dives. Rept. 599, 1937.
- Biermann, David and Hartman, Edwin P.:
 Tests of Five Full-Scale Propellers
 in the Presence of a Radial and a
 Liquid-Cooled Engine Nacelle, Including Tests of Two Spinners. Rept.
 642, 1938.
- Biermann, David and Hartman, Edwin P.: The Aerodynamic Characteristics of Six Full-Scale Propellers Having Different Airfoil Sections. Rept. 650, 1939.
- Biermann, David and Hartman, Edwin P.: Tests of Two Full-Scale Propellers with Different Pitch Distributions, at Blade Angles up to 60°. Rept. 658, 1939.
- Lesley, E. P.: Tandem Air Propellers. TN 689, Feb. 1939.

- Hartman, Edwin P. and Biermann, David: Static Thrust and Power Characteristics of Six Full-Scale Propellers. Rept. 684, 1940.
- Reissner, Hans: A Generalized Vortex Theory of the Screw Propeller and Its Application. TN 750, Feb. 1940.
- Biermann, David; Hartman, Edwin P. and Pepper, Edward: Full-Scale Tests of Several Propellers Equipped with Spinners, Cuffs, Airfoil and Round Shanks, and NACA 16-Series Sections. ACR, Oct. 1940.
- Stickle, George W. and Crigler, John L.: Propeller Analysis from Experimental Data. Rept. 712, 1941.
- Stickle, George W.; Crigler, John L. and Naiman, Irven: Effect of Body Nose Shape on the Propulsive Efficiency of a Propeller. Rept. 725, 1941.
- Lesley, E. P.: Tandem Air Propellers II. TN 822, Aug. 1941.
- Reid, Elliott G.: The Effects of Hub Drag, Solidity, Dual Rotation, and Number of Blades upon the Efficiency of High-Pitch Propellers. ACR (WR W-84), Oct. 1941.
- Biermann, David and Gray, W. H.: Wind-Tunnel Tests of Eight-Blade Singleand Dual-Rotating Propellers in the Tractor Position. ARR (WR L-384), Nov. 1941.
- Biermann, David and Gray, W. H.: Wind Tunnel Tests of Single- and Dual-Rotating Pusher Propellers Having from Three to Eight Blades. ARR (WR L-359), Feb. 1942.
- McHugh, James G. and Pepper, Edward: The Characteristics of Two Model Six-Blade Counterrotating Pusher Propellers of Conventional and Improved Aerodynamic Design. ARR (WR L-404), June 1942.
- Crigler, John L. and Talkin, Herbert W.:
 Propeller Selection from Aerodynamic Considerations. ACR (WR L-363), July 1942.
- Hartman, Edwin P. and Feldman, Lewis: Aerodynamic Problems in the Design of Efficient Propellers. ACR (WR L-753), Aug. 1942.
- Gray, W. H.: Wind-Tunnel Tests of Single- and Dual-Rotating Tractor Propellers at Low Blade Angles and of Two- and Three-Blade Tractor Propellers at Blade Angles up to 65°. ARR (WR L-316), Feb. 1943.

- Pitch Distribution Design Variables (Cont.)
- Gray, W. H.: Wind-Tunnel Tests of Dual-Rotating Propellers with Systematic Differences in Number of Blades, Blade Setting, and Rotational Speed of Front and Rear Propellers. ARR L4E22 (WR L-80), May 1944.
- McHugh, James G. and Pepper, Edward:
 The Propeller and Cooling-Air-Flow
 Characteristics of a Twin-Engine
 Airplane Model Equipped with NACA
 Ds-Type Cowlings and with Propellers
 of NACA 16-Series Airfoil Sections.
 ACR L4I20 (WR L-638), Sept. 1944.
- Reid, Elliott G.: Studies of Blade Shank Form and Pitch Distribution for Constant-Speed Propellers. TN 947, Jan. 1945.
- Gray, W. H. and Gilman, Jean, Jr.: Characteristics of Several Single- and Dual-Rotating Propellers in Negative Thrust. MR L5C07 (WR L-634), March 1945.
- Maynard, Julian D. and Evans, Albert J.:
 Tests of Four Full-Scale Propellers
 To Determine the Effect of TrailingEdge Extensions on Propeller Aerodynamic Characteristics. MR L5G10
 (WR L-582), July 1945.
- Reid, Elliott G.: Wake Studies of Eight Model Propellers. TN 1040, July 1946.
- Gilman, Jean, Jr.: Wind-Tunnel Tests and Analysis of Three 10-Foot-Diameter Three-Blade Tractor Propellers Differing in Pitch Distribution. ARR L6E22, Aug. 1946.
- Queijo, M. J.: Wind-Tunnel Tests of a Modified Koppers Aeromatic Impeller-Generator Combination TED NO. NACA ARR 2901. RM L6K19, Dec. 1946.
- Gilman, Jean, Jr.: Wind-Tunnel Tests and Analysis of Two 10-Foot-Diameter Six-Blade Dual-Rotating Tractor Propellers Differing in Pitch Distribution. TN 1634, June 1948.
- Kruger, W.: On Wind Tunnel Tests and Computations Concerning the Problem of Shrouded Propellers. TM 1202, Feb. 1949.

BLADE PLANFORMS (1.5.2.4)

Durand, William F.: Experimental Research on Air Propellers. Rept. 14, 1917.

- Durand, William F. and Lesley, E. P.: Experimental Research on Air Propellers, II. Rept. 30, 1920.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers, III. Rept. 64, 1920.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers, IV. Rept. 109, 1921.
- Durand, W. F. and Lesley, E. P.: Experimental Research on Air Propellers, V. Rept. 141, 1922.
- Diehl, Walter S.: The General Efficiency Curve for Air Propellers. Rept. 168, 1923.
- Munk, Max M.: Analysis of W. F. Durand's and E. P. Lesley's Propeller Tests. Rept. 175, 1923.
- Munk, Max M.: Analysis of Dr. Schaffran's Propeller Model Tests. TN 158, Sept. 1923.
- Weick, Fred E.: Simplified Propeller Design for Low-Powered Airplanes. TN 212, Jan. 1925.
- Weick, Fred E.: Full Scale Wind Tunnel Tests with a Series of Propellers of Different Diameters on a Single Fuselage. Rept. 339, 1930.
- Weick, Fred E.: Full Scale Wind Tunnel Tests on Several Metal Propellers having Different Blade Forms. Rept. 340, 1930.
- Wood, Donald H.: Full Scale Wind Tunnel Tests of a Propeller with the Diameter Changed by Cutting Off the Blade Tips. Rept. 351, 1930.
- Hartman, Edwin P.: Working Charts for the Determination of Propeller Thrust at Various Air Speeds. Rept. 481, 1934.
- Biermann, David and Hartman, Edwin P.: The Effect of Compressibility on Eight Full-Scale Propellers Operating in the Take-Off and Climbing Range. Rept. 639, 1938.
- Hartman, Edwin P. and Biermann, David: The Aerodynamic Characteristics of Four Full-Scale Propellers Having Different Planforms. Rept. 643, 1938.
- Biermann, David; Hartman, Edwin P. and Pepper, Edward: Full-Scale Tests of Several Propellers Equipped with Spinners, Cuffs, Airfoil and Round Shanks, and NACA 16-Series Sections. ACR, Oct. 1940.

- Blade Planforms Design Variables (Cont.)
- Luoma, Arvo A.: Critical Speeds and Profile Drag of the Inboard Sections of a Conventional Propeller. ARR (WR L-369), Sept. 1941.
- Biermann, David and Pepper, Edward: Tests of Several Propeller Cuffs Designed for Different Loadings. ARR. Feb. 1942.
- Biermann, David and Conway, Robert N.: Wind-Tunnel Tests of Propellers Having a Biplane Arrangement of the Blades. ARR, March 1942.
- McHugh, James G. and Pepper, Edward: The Characteristics of Two Model Six-Blade Counterrotating Pusher Propellers of Conventional and Improved Aerodynamic Design. ARR (WR L-404), June 1942.
- Crigler, John L. and Talkin, Herbert W.: Propeller Selection from Aerodynamic Considerations. ACR (WR L-363), July 1942.
- Hartman, Edwin P. and Feldman, Lewis: Aerodynamic Problems in the Design of Efficient Propellers. ACR (WR L-753), Aug. 1942.
- Desmond, Gerald L. and Freitag, Robert F.: Working Charts for the Computation of Propeller Thrust Throughout the Take-Off Range. ARR 3G26 (WR W-100), July 1943.
- Reid, Elliott G.: Studies of Blade Shank Form and Pitch Distribution for Constant-Speed Propellers. TN 947, Jan. 1945.
- Crigler, John L.: The Effect of Trailing-Edge Extension Flaps on Propeller Characteristics. ACR L5A11 (WR L-165), Jan. 1945.
- Maynard, Julian D. and Evans, Albert J.:
 Tests of Four Full-Scale Propellers
 To Determine the Effect of TrailingEdge Extensions on Propeller Aerodynamic Characteristics. MR L5G10
 (WR L-582), July 1945.
- Reid, Elliott G.: Wake Studies of Eight Model Propellers. TN 1040, July 1946.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Hicks, Chester W. and Hubbard, Harvey H.: Comparison of Sound Emission from Two-Blade, Four-Blade, and Seven-Blade Propellers. TN 1354, July 1947.

- Hammack, Jerome B.: Flight Investigation in Climb and at High Speed of a Two-Blade and a Three-Blade Propeller. TN 1784, Jan. 1949.
- Reid, Elliott G.: The Influence of Blade-Width Distribution on Propeller Characteristics. TN 1834, March 1949.
- Hubbard, Harvey H. and Regier, Arthur A.: Free-Space Oscillating Pressures near the Tips of Rotating Propellers. TN 1870, April 1949.

MACH NUMBER EFFECTS (1.5.2.5)

- Reed, S. Albert: Air Reactions to Objects Moving at Rates Above the Velocity of Sound with Application to the Air Propeller. TM 168, Nov. 1922.
- Fales, E. N.: Apparatus for High-Speed Research, Applicable to Propeller Tip Effect; and Comments of Mr. Ackeret and Dr. Prandtl on Certain Features of the Göttingen Wind Tunnel. MP 19, Jan. 1926.
- Crowley, J. W., Jr. and Mixson, R. E.: Characteristics of Five Propellers In Flight. Rept. 292, 1928.
- Weick, Fred E.: Full-Scale Tests on a Thin Metal Propeller at Various Tip Speeds. Rept. 302, 1928.
- Wood, Donald H.: Full-Scale Tests of Metal Propellers at High Tip Speeds. Rept. 375, 1931.
- Deming, A. F.: Noise from Propellers with Symmetrical Sections at Zero Blade Angle. TN 605, July 1937.
- Biermann, David and Hartman, Edwin P.:
 The Effect of Compressibility on
 Eight Full-Scale Propellers Operating
 in the Take-Off and Climbing Range.
 Rept. 639, 1938.
- Stack, John and Lindsey, W. F.: Tests of N-85, N-86, and N-87 Airfoil Sections in the 11-Inch High-Speed Wind Tunnel. TN 665, Sept. 1938.
- Losch, F.: Calculation of the Induced Efficiency of Heavily Loaded Propellers Having Infinite Number of Blades; Kramer, K. N.: The Induced Efficiency of Optimum Propellers Having a Finite Number of Blades; and Bock, G. and Nikodemus, R.: Prospects of Propeller Drive for High Flying Speeds. TM 884, Jan. 1940.
- Hartman, Edwin P. and Biermann, David: Static Thrust and Power Characteristics of Six Full-Scale Propellers. Rept. 684, 1940.

- Mach No. Effects Design Variables (Cont.)
- Dickinson, H. B.: Propeller-Design Problems of High-Speed Airplanes. ACR, April 1941.
- Vogeley, A. W.: Preliminary Results of Flight Tests of a Conventional Three-Blade Propeller at High Speeds. CB, April 1942.
- Crigler, John L. and Talkin, Herbert W.:
 Propeller Selection from Aerodynamic
 Considerations. ACR (WR L-363),
 July 1942.
- Hartman, Edwin P. and Feldman, Lewis: Aerodynamic Problems in the Design of Efficient Propellers. ACR (WR L-753), Aug. 1942.
- Vogeley, A. W.: Flight Measurements of Compressibility Effects on a Three-Blade Thin Clark Y Propeller Operating at Constant Advance-Diameter Ratio and Blade Angle. ACR 3G12 (WR L-505), July 1943.
- Vogeley, A. W.: Flight Measurements of Compressibility Effects on a Two-Blade Thin Clark Y Propeller. ACR 3K06, Nov. 1943.
- Stack, John; Draley, Eugene C.; Delano, James B. and Feldman, Lewis: Investigation of Two-Blade Propellers at High Forward Speeds in the NACA 8-Foot High-Speed Tunnel. I - Effects of Compressibility. NACA 4-308-03 Blade. ACR 4A10, Jan. 1944.
- Vogeley, A. W.: Climb and High-Speed Tests of a Curtiss No. 714-1C2-12 Four-Blade Propeller on the Republic P-47C Airplane. ACR L4L07 (WR L-177), Dec. 1944.
- Cleary, Harold E.: Effects of Compressibility on Maximum Lift Coefficients for Six Propeller Airfoils. ACR L4L21a (WR L-514), Jan. 1945.
- Ribner, Herbert S.: Propellers in Yaw. Rept. 820, 1945.
- Wick, Bradford H. and Anderson, Adrien E.: An Investigation in the 40- by 80-Foot Wind Tunnel of Tip-Speed Effects on Propeller Characteristics in the Take-Off and Climbing Range. ACR A5L12, Feb. 1946.
- Ribner, Herbert S.: A Transonic Propeller of Triangular Plan Form. TN 1303, May 1947.
- Hicks, Chester W. and Hubbard, Harvey H.: Comparison of Sound Emission from Two-Blade, Four-Blade, and Seven-Blade Propellers. TN 1354, July 1947.

- Hammack, Jerome B.: Investigation of Thrust Losses Due To Shanks of a Flared-Shank Two-Blade Propeller on a Slender-Nose Airplane. TN 1414, Aug. 1947.
- Vogeley, A. W.: Calculation of the Effect of Thrust-Axis Inclination on Propeller Disk Loading and Comparison with Flight Measurements. TN 1721, Oct. 1948.
- Hammack, Jerome B.: Flight Investigation in Climb and at High Speed of a Two-Blade and a Three-Blade Propeller. TN 1784, Jan. 1949.
- Hubbard, Harvey H. and Regier, Arthur A.: Free-Space Oscillating Pressures near the Tips of Rotating Propellers. TN 1870, April 1949.

PUSHER (1.5.2.6)

- Prandtl, L.: Mutual Influence of Wings and Propellers. TN 74, Dec. 1921.
- McHugh, James G.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. IV - Thick Wing - Various Radial-Engine Cowlings - Tandem Propellers. Rept. 505, 1934.
- Wood, Donald H. and Bioletti, Carlton: Test of Nacelle-Propeller Combinations to Various Positions with Reference to Wings. VI - Wings and Nacelles with Pusher Propeller. Rept. 507, 1934.
- Silverstein, Abe and Wilson, Herbert A., Jr.: Aerodynamic Characteristics of a 4-Engine Monoplane Showing Effects of Enclosing the Engines in the Wing and Comparisons of Tractorand Pusher-Propeller Arrangements. ACR (WR L-456), April 1938.
- Harmon, Hubert N.: Wind-Tunnel Tests of Several Model Tractor-Propeller and Pusher-Propeller Wing Extension-Shaft Arrangements. ACR, June 1941.
- Biermann, David and Gray, W. H.: Wind Tunnel Tests of Single- and Dual-Rotating Pusher Propellers Having from Three to Eight Blades. ARR (WR L-359), Feb. 1942.
- Becker, John V.: High-Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.

- Pusher Design Variables (Cont.)
- McHugh, James G. and Pepper, Edward: The Characteristics of Two Model Six-Blade Counterrotating Pusher Propellers of Conventional and Improved Aerodynamic Design. ARR (WR L-404), June 1942.
- Wilson, Herbert A., Jr.: Full-Scale-Tunnel Investigation of a Multiengine Pusher-Propeller Installation. ARR (WR L-246), Nov. 1942.
- Gray, W. H. and Mastrocola, Nicholas: Representative Operating Charts of Propellers Tested in the NACA 20-Foot Propeller-Research Tunnel. ARR 3125 (WR L-286), Sept. 1943.
- Abbott, Frank T., Jr.: Lift and Drag Data for 30 Pusher-Propeller Shaft Housings on an NACA 65, 3-018 Airfoil Section. ACR 3K13 (WR L-299), Nov. 1943.
- Corson, Blake W., Jr. and Miller, Mason F.: Considerations of Wake-Excited Vibratory Stress in a Pusher Propeller. ACR L4B28 (WR L-146), Feb. 1944.
- Weiberg, James A. and Schnurbusch, Alfred W.: Flying Qualities of a Bomber Airplane with Engines in the Fuselage as Estimated from Tests of a 1/8-Scale Powered Model. MR A4K04 (WR A-78), Nov. 1944.
- Bartlett, Walter A., Jr. and Marino, Alfred A.: An Investigation of the Mutual Interference Effects of a Tail-Surface - Stern Propeller Installation on a Model Simulating the Douglas XB-42 Empennage. MR L4K09 (WR L-625), Nov. 1944.
- Sandahl, Carl A.: Wind-Tunnel Investigation of Effects of a Pusher Propeller on Lift, Profile Drag, Pressure Distribution, and Boundary-Layer Transition of a Flapped Wing. ACR L5C08 (WR L-148), April 1945.
- Weiberg, James A. and Schnurbusch, Alfred W.: Aerodynamic Characteristics of a 1/8-Scale Powered Model of a Bomber Airplane with Engines in the Fuselage. MR A5J12 (WR A-89), Oct. 1945.
- Boxer, Emanuel: Wind-Tunnel Investigation of Alternative Propellers Operating Behind Deflected Wing Flaps for the XB-36 Airplane. MR L5K12a (WR L-533), Dec. 1945.
- Hubbard, Harvey H.: Sound from Dual-Rotating and Multiple Single-Rotating Propellers. TN 1654, July 1948.

DUAL ROTATION (1.5.2.7)

- Durand, William F. and Lesley, E. P.: Experimental Research on Air Propellers, II. Rept. 30, 1920.
- Munk, Max M.: Reduction in Efficiency of Propellers Due To Slipstream. TN 170, Dec. 1923.
- De Caria, Ugo: Counter-Propellers. TM 587, Oct. 1930.
- Betz, Albert: The Theory of Contra-Vanes Applied to the Propeller. TM 909, Sept. 1939.
- Stickle, George W. and Crigler, John L.: Propeller Analysis from Experimental Data. Rept. 712, 1941.
- Luoma, Arvo A.: Critical Speeds and Profile Drag of the Inboard Sections of a Conventional Propeller. ARR (WR L-369), Sept. 1941.
- Reid, Elliott G.: The Effects of Hub Drag, Solidity, Dual Rotation, and Number of Blades upon the Efficiency of High-Pitch Propellers. ACR (WR W-84), Oct. 1941.
- Biermann, David and Conway, Robert N.: The Selection of Propellers for High Thrust at Low Airspeed. ARR (WR L-483), Oct. 1941.
- Biermann, David and Gray, W. H.: Wind-Tunnel Tests of Eight-Blade Singleand Dual-Rotating Propellers in the Tractor Position. ARR (WR L-384), Nov. 1941.
- Biermann, David and Hartman, Edwin P.: Wind-Tunnel Tests of Four- and Six-Blade Single- and Dual-Rotating Tractor Propellers. Rept. 747, 1942.
- Biermann, David and Gray, W. H.: Wind Tunnel Tests of Single- and Dual-Rotating Pusher Propellers Having from Three to Eight Blades. ARR (WR L-359), Feb. 1942.
- McHugh, James G. and Pepper, Edward: The Characteristics of Two Model Six-Blade Counterrotating Pusher Propellers of Conventional and Improved Aerodynamic Design. ARR (WR L-404), June 1942.
- Biermann, David; Gray, W. H. and Maynard, Julian D.: Wind-Tunnel Tests of Single- and Dual-Rotating Tractor Propellers of Large Blade Width. ARR (WR L-385), Sept. 1942.

- Dual Rotation Design Variables (Cont.)
- Gray, W. H.: Wind-Tunnel Tests of Single- and Dual-Rotating Tractor Propellers at Low Blade Angles and of Two- and Three-Blade Tractor Propellers at Blade Angles up to 65°. ARR (WR L-316), Feb. 1943.
- Sweberg, Harold H.: Air-Flow Surveys in the Region of the Tail Surfaces of a Single-Engine Airplane Equipped with Dual-Rotating Propellers. ACR (WR L-424), March 1943.
- Naiman, Irven: Method of Calculating Performance of Dual-Rotating Propellers from Airfoil Characteristics. ARR 3E24 (WR L-330), May 1943.
- Desmond, Gerald L. and Freitag, Robert F.: Working Charts for the Computation of Propeller Thrust Throughout the Take-Off Range. ARR 3G26 (WR W-100), July 1943.
- Miller, Mason F.: Wind-Tunnel Vibration Tests of Dual-Rotating Propellers. ARR 3I11 (WR L-405), Sept. 1943.
- Theodorsen, Theodore: The Theory of Propellers. I - Determination of the Circulation Function and the Mass Coefficient for Dual-Rotating Propellers. Rept. 775, 1944.
- Theodorsen, Theodore: The Theory of Propellers. IV - Thrust, Energy, and Efficiency Formulas for Single- and Dual-Rotating Propellers with Ideal Circulation Distribution. Rept. 778, 1944.
- Gray, W. H.: Wind-Tunnel Tests of Dual-Rotating Propellers with Systematic Differences in Number of Blades, Blade Setting, and Rotational Speed of Front and Rear Propellers. ARR L4E22 (WR L-80), May 1944.
- Bartlett, Walter A., Jr. and Marino,
 Alfred A.: An Investigation of the
 Mutual Interference Effects of a TailSurface Stern Propeller Installation
 on a Model Simulating the Douglas
 XB-42 Empennage. MR L4K09 (WR
 L-625), Nov. 1944.
- Bartlett, Walter A., Jr.: Wind-Tunnel Tests of a Dual-Rotating Propeller Having One Component Locked or Windmilling. ARR L5A13a (WR L-214), Jan. 1945.
- Gray, W. H. and Gilman, Jean, Jr.: Characteristics of Several Single- and Dual-Rotating Propellers in Negative Thrust. MR L5C07 (WR L-634), March 1945.

- Stevens, Victor I., Jr.; McCullough, George B. and Hanson, Frederick H.: An Experimental Investigation of the Effect of Propellers Used as Aerodynamic Brakes on Stability and Control. ARR 5C01 (WR A-19), July 1945.
- Kuenzig, John K. and Palter, Herman: Aerodynamics of the Carburetor Air Scoop and the Engine Cowling of the XTB2D-1 Airplane. MR E6E27 (WR E-280), June 1946.
- Platt, Robert J., Jr.: Static Tests of a Shrouded and an Unshrouded Propeller. RM L7H25, Feb. 1948.
- Gilman, Jean, Jr.: Wind-Tunnel Tests and Analysis of Two 10-Foot-Diameter Six-Blade Dual-Rotating Tractor Propellers Differing in Pitch Distribution. TN 1634, June 1948.
- Hubbard, Harvey H.: Sound from Dual-Rotating and Multiple Single-Rotating Propellers. TN 1654, July 1948.
- Crigler, John L.: Application of Theodorsen's Theory to Propeller Design. RM L8F30, July 1948.
- Ginzel, F.: Calculation of Counterrotating Propellers. TM 1208, March 1949.

INTERFERENCE OF BODIES (1.5.2.8)

- Warner, Edward P.; Norton, F. H. and Hebbert, C. M.: The Design of Wind Tunnels and Wind Tunnel Propellers. Rept. 73, 1919.
- Prandtl, L.: Mutual Influence of Wings and Propellers. TN 74, Dec. 1921.
- Lesley, E. P. and Woods, B. M.: The Effect of Slipstream Obstructions on Air Propellers. Rept. 177, 1924.
- Robert, Lt. Col.: Methods of Experimentation with Models and Utilization of Results. TM 247, Feb. 1924.
- Weick, Fred E.: Simplified Propeller Design for Low-Powered Airplanes. TN 212, Jan. 1925.
- Ackeret, J.: Recent Experiments at the Gottingen Aerodynamic Institute. TM 323, July 1925.
- Weick, Fred E.: Propeller Scale Effect and Body Interference. TN 225, Aug. 1925.

- Interference Design Variables (Cont.)
- Durand, W. F. and Lesley, E. P.: Comparison of Tests on Airplane Propellers in Flight with Wind Tunnel Model Tests on Similar Forms. Rept. 220, 1926.
- Durand, W. F.: Interaction Between Airplane Propellers and Airplane Structures. Rept. 235, 1926.
- Weick, Fred E.: Propeller Design III. A Simple System Based on Model Propeller Test Data. TN 237, May 1926.
- Model Propellers in Combination with a Model VE-7 Airplane. TN 245, Aug. 1926.
- Crowley, J. W., Jr. and Mixson, R. E.: Characteristics of Five Propellers in Flight. Rept. 292, 1928.
- Lesley, E. P. and Reid, Elliott G.: Tests of Five Metal Model Propellers with Various Pitch Distributions in a Free Wind Stream and in Combination with a Model VE-7 Fuselage. Rept. 326, 1928.
- Weick, Fred E.: The Effect of the Sperry Messenger Fuselage on the Air Flow at the Propeller Plane. TN 274, Jan. 1928.
- Troller, Theodor: Influence of Fuselage on Propeller Design. TM 492, Dec. 1928.
- Weick, Fred E.: Full-Scale Tests of Wood Propellers on a VE-7 Airplane in the Propeller Research Tunnel. Rept. 301, 1929.
- Weick, Fred E.: The Effect of Reduction Gearing on Propeller-Body Interference as Shown by Full Scale Wind Tunnel Tests. Rept. 338, 1929.
- Weick, Fred E. and Wood, Donald H.:
 The Effect of the Wings of Single
 Engine Airplanes on Propulsive Efficiency as Shown by Full Scale Wind
 Tunnel Tests. TN 322, Oct. 1929.
- Weick, Fred E.: Full Scale Wind Tunnel Tests with a Series of Propellers of Different Diameters on a Single Fuselage. Rept. 339, 1930.
- Weick, Fred E.: Full Scale Wind Tunnel Tests on Several Metal Propellers Having Different Blade Forms. Rept. 340, 1930.
- Lesley, E. P.: Test of an Adjustable Pitch Model Propeller at Four Blade Settings. TN 333, Feb. 1930.

- Freeman, Hugh B.: The Effect of Small Angles of Yaw and Pitch on the Characteristics of Airplane Propellers. Rept. 389, 1931.
- Wood, Donald H.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings - I. Thick Wing - NACA Cowled Nacelle -Tractor Propeller. Rept. 415, 1932.
- Wood, Donald H.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. II - Thick Wing - Various Radial-Engine Cowlings - Tractor Propeller. Rept. 436, 1932.
- Windler, Ray: The Effect of Propellers and Nacelles on the Landing Speeds of Tractor Monoplanes. TN 420, May 1932.
- Wood, Donald H.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. III -Clark Y Wing - Various Radial -Engine Cowlings - Tractor Propeller. Rept. 462, 1933.
- Hartman, Edwin P.: Negative Thrust and Torque Characteristics of an Adjustable-Pitch Metal Propeller. Rept. 464, 1933.
- Hartman, Edwin P.: Working Charts for the Determination of Propeller Thrust at Various Air Speeds. Rept. 481, 1934.
- McHugh, James G.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. IV - Thick Wing - Various Radial-Engine Cowlings - Tandem Propellers. Rept. 505, 1934.
- Valentine, E. Floyd: Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. V - Clark Y Biplane Cellule - NACA Cowled Nacelle - Tractor Propeller. Rept. 506, 1934.
- Wood, Donald H. and Bioletti, Carlton: Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. VI - Wings and Nacelles with Pusher Propeller. Rept. 507, 1934.
- Wood, Donald H.: Wing-Nacelle-Propeller Tests - Comparative Tests of Liquid-Cooled and Air-Cooled Engine Nacelles. ACR, Jan. 1934.
- Wieselsberger, C.: Contribution to the Mutual Interference of Wing and Propeller. TM 754, Sept. 1934.

- Interference Design Variables (Cont.)
- Weick, Fred E.: Working Charts for the Selection of Aluminum Alloy Propellers of a Standard Form to Operate with Various Aircraft Engines and Bodies. Rept. 350, 1935.
- Wood, Donald H. and Windler, Ray: The Effect of Lateral Inclination of the Thrust Axis and of Sweepback of the Leading Edge of the Wing on Propulsive and Net Efficiencies of a Wing-Nacelle-Propeller Combination. ACR, April 1935.
- Windler, Ray: Tests of a Wing-Nacelle-Propeller Combination at Several Pitch Settings up to 42°. Rept. 564, 1936.
- Robinson, Russell G. and Herrnstein, William H., Jr.: Wing-Nacelle-Propeller Interference for Wings of Various Spans Force and Pressure-Distribution Tests. Rept. 569, 1936.
- Theodorsen, Theodore; Stickle, George W. and Brevoort, M. J.: Characteristics of Six Propellers Including the High-Speed Range. Rept. 594, 1937.
- Betz, A.: The Ground Effect on Lifting Propellers. TM 836, Aug. 1937.
- Hartman, Edwin P. and Biermann, David: The Aerodynamic Characteristics of Full-Scale Propellers Having 2, 3, and 4 Blades of Clark Y and R.A.F. 6 Airfoil Sections. Rept. 640, 1938.
- Hartman, Edwin P. and Biermann, David: The Negative Thrust and Torque of Several Full-Scale Propellers and Their Application to Various Flight Problems. Rept. 641, 1938.
- Biermann, David and Hartman, Edwin P.: Tests of Five Full-Scale Propellers in the Presence of a Radial and a Liquid-Cooled Engine Nacelle, Including Tests of Two Spinners. Rept. 642, 1938.
- McHugh, James G. and Derring, Eldridge H.: The Effect of Nacelle-Propeller Diameter Ratio on Body Interference and on Propeller and Cooling Characteristics. Rept. 680, 1939.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing-Cooling Ducts. Effects of Propeller Slipstream. ACR, March 1939.
- Franke, A. and Weinig, F.: The Effect of the Slipstream on an Airplane Wing. TM 920, Nov. 1939.

- Hartman, Edwin P. and Biermann, David: Static Thrust and Power Characteristics of Six Full-Scale Propellers. Rept. 684, 1940.
- Katzoff, S.: Longitudinal Stability and Control with Special Reference to Slipstream Effects. Rept. 690, 1940.
- Biermann, David; Hartman, Edwin P. and Pepper, Edward: Full-Scale Tests of Several Propellers Equipped with Spinners, Cuffs, Airfoil and Round Shanks, and NACA 16-Series Sections. ACR, Oct. 1940.
- Stickle, George W. and Crigler, John L.: Propeller Analysis from Experimental Data. Rept. 712, 1941.
- Stickle, George W.; Crigler, John L. and Naiman, Irven: Effect of Body Nose Shape on the Propulsive Efficiency of a Propeller. Rept. 725, 1941.
- Harmon, Hubert N.: Wind-Tunnel Tests of Several Model Tractor-Propeller and Pusher-Propeller Wing Extension-Shaft Arrangements. ACR, June 1941.
- Reid, Elliott G.: The Effects of Hub Drag, Solidity, Dual Rotation, and Number of Blades upon the Efficiency of High-Pitch Propellers. ACR (WR W-84), Oct. 1941.
- Biermann, David and Gray, W. H.: Wind-Tunnel Tests of Eight-Blade Singleand Dual-Rotating Propellers in the Tractor Position. ARR (WR L-384), Nov. 1941.
- Biermann, David and Hartman, Edwin P.: Wind-Tunnel Tests of Four- and Six-Blade Single- and Dual-Rotating Tractor Propellers. Rept. 747, 1942.
- Biermann, David and Gray, W. H.: Wind Tunnel Tests of Single- and Dual-Rotating Pusher Propellers Having from Three to Eight Blades. ARR (WR L-359), Feb. 1942.
- Biermann, David and Conway, Robert N.: Wind-Tunnel Tests of Propellers Having a Biplane Arrangement of the Blades. ARR, March 1942.
- Conway, Robert N.: Miscellaneous Information on the Effect of Spinner Cut-Outs on Propeller Performance. ARR, July 1942.
- Biermann, David; Gray, W. H. and Maynard, Julian D.: Wind-Tunnel Tests of Single- and Dual-Rotating Tractor Propellers of Large Blade Width. ARR (WR L-385), Sept. 1942.

- Interference Design Variables (Cont.)
- Gray, W. H. and Mastrocola, Nicholas: Representative Operating Charts of Propellers Tested in the NACA 20-Foot Propeller Research Tunnel. ARR 3I25 (WR L-286), Sept. 1943.
- Corson, Blake W., Jr. and Miller, Mason F.: Considerations of Wake-Excited Vibratory Stress in a Pusher Propeller. ACR L4B28 (WR L-146), Feb. 1944.
- McHugh, James G. and Pepper, Edward:
 The Propeller and Cooling-Air-Flow
 Characteristics of a Twin-Engine
 Airplane Model Equipped with NACA
 DS-Type Cowlings and with Propellers of NACA 16-Series Airfoil Sections. ACR L4I20 (WR L-638), Sept.
 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- Bartlett, Walter A., Jr. and Marino, Alfred A.: An Investigation of the Mutual Interference Effects of a Tail-Surface - Stern Propeller Installation on a Model Simulating the Douglas XB-42 Empennage. MR L4K09 (WR L-625), Nov. 1944.
- Vogeley, A. W.: Climb and High-Speed Tests of a Curtiss No. 714-1C2-12 Four-Blade Propeller on the Republic P-47C Airplane. ACR L4L07 (WR L-177), Dec. 1944.
- Bartlett, Walter A., Jr.: Wind-Tunnel Tests of a Dual-Rotating Propeller Having One Component Locked or Windmilling. ARR L5A13a (WR L-214), Jan. 1945.
- Goranson, R. Fabian: Flight Tests of an SB2C-3 Airplane with a Production and Tilted Propeller Axis TED NO. NACA 2202. MR L5E19a (WR L-675), May 1945.
- Stevens, Victor I., Jr.; McCullough, George B. and Hanson, Frederick H.: An Experimental Investigation of the Effect of Propellers Used as Aerodynamic Brakes on Stability and Control. ARR 5C01 (WR A-19), July 1945.
- Boxer, Emanuel: Wind-Tunnel Investigation of Alternative Propellers Operating Behind Deflected Wing Flaps for the XB-36 Airplane. MR L5K12a (WR L-533), Dec. 1945.
- Corson, Blake W., Jr. and Maynard, Julian D.: The Effect of Simulated Icing on Propeller Performance. TN 1084, June 1946.

- Johnston, J. Ford; Klawans, Bernard B. and Danforth, Edward C. B., III: Flight Investigation of Factors Affecting the Carburetor Ram and Nacelle Drag of an A-26B Airplane. MR L6F21 (WR L-740), July 1946.
- Hammack, Jerome B.: Investigation of Thrust Losses Due To Shanks of a Flared-Shank Two-Blade Propeller on a Slender-Nose Airplane. TN 1414, Aug. 1947.
- Purser, Paul E. and Spear, Margaret F.: Wind-Tunnel Investigation of Effects of Unsymmetrical Horizontal-Tail Arrangements on Power-On Static Longitudinal Stability of a Single-Engine Airplane Model. TN 1474, Oct. 1947.
- Platt, Robert J., Jr.: Static Tests of a Shrouded and an Unshrouded Propeller. RM L7H25, Feb. 1948.
- Boswinkle, Robert W., Jr.: Air-Flow Surveys in the Vicinity of Representative NACA 1-Series Cowlings. RM L8A15a, May 1948.
- Gilman, Jean, Jr.: Wind-Tunnel Tests and Analysis of Two 10-Foot-Diameter Six-Blade Dual-Rotating Tractor Propellers Differing in Pitch Distribution. TN 1634, June 1948.
- Hubbard, Harvey H.: Sound from Dual-Rotating and Multiple Single-Rotating Propellers. TN 1654, July 1948.
- Vogeley, A. W.: Calculation of the Effect of Thrust-Axis Inclination on Propeller Disk Loading and Comparison with Flight Measurements. TN 1721, Oct. 1948.
- Weil, Joseph and Sleeman, William C., Jr.: Prediction of the Effects of Propeller Operation on the Static Longitudinal Stability of Single-Engine Tractor Monoplanes with Flaps Retracted. TN 1722, Oct. 1948.
- Kruger, W.: On Wind Tunnel Tests and Computations Concerning the Problem of Shrouded Propellers. TM 1202, Feb. 1949.
- Hubbard, Harvey H. and Regier, Arthur A.: Free-Space Oscillating Pressures near the Tips of Rotating Propellers. TN 1870, April 1949.

PITCH AND YAW (1.5.2.9)

- Warner, E. P.: The Problem of the Helicopter. TN 4, May 1920.
- Durand, W. F. and Lesley, E. P.: Tests on Air Propellers in Yaw. Rept. 113, 1921.

- Pitch and Yaw Design Variables (Cont.)
- Flachsbart, O. and Kröber, G.: Experimental Investigation of Aircraft Propellers Exposed to Oblique Air Currents. TM 562, April 1930.
- Freeman, Hugh B.: The Effect of Small Angles of Yaw and Pitch on the Characteristics of Airplane Propellers. Rept. 389, 1931.
- Misztal, Franz: The Problem of the Propeller in Yaw with Special Reference to Airplane Stability. TM 696, Jan. 1933.
- Bennett, J. A. J.: The Flight of an Autogiro at High Speed. TM 729, Dec. 1933.
- Wood, Donald H. and Windler, Ray: The Effect of Lateral Inclination of the Thrust Axis and of Sweepback of the Leading Edge of the Wing on Propulsive and Net Efficiencies of a Wing-Nacelle-Propeller Combination. ACR, April 1935.
- Lesley, E. P.; Worley, George F. and Moy, Stanley: Air Propellers in Yaw. Rept. 597, 1937.
- Panetti, M.: Experimental Apparatus for the Study of Propellers. TM 819, March 1937.
- Franke, A. and Weinig, F.: The Effect of the Slipstream on an Airplane Wing. TM 920, Nov. 1939.
- Runckel, Jack F.: The Effect of Pitch on Force and Moment Characteristics of Full-Scale Propellers of Five Solidities. ARR (WR L-446), June 1942.
- Vogeley, A. W.: Flight Measurements of Compressibility Effects on a Three-Blade Thin Clark Y Propeller Operating at Constant Advance-Diameter Ratio and Blade Angle. ACR 3G12 (WR L-505), July 1943.
- Ribner, Herbert S.: Proposal for a Propeller Side-Force Factor. RB 3L02 (WR L-336), Dec. 1943.
- Bailey, F. J., Jr. and Gustafson, F. B.: Charts for Estimation of the Characteristics of a Helicopter Rotor in Forward Flight. I - Profile Drag-Lift Ratio for Untwisted Rectangular Blades. ACR L4H07 (WR L-110), Aug. 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.

- Ribner, Herbert S.: Formulas for Propellers in Yaw and Charts of the Side-Force Derivative. Rept. 819, 1945.
- Ribner, Herbert S.: Propellers in Yaw. Rept. 820, 1945.
- Coleman, Robert P.; Feingold, Arnold M. and Stempin, Carl W.: Evaluation of the Induced-Velocity Field of an Idealized Helicopter Rotor. ARR L5E10 (WR L-126), June 1945.
- Pendley, Robert E.: Effect of Propeller-Axis Angle of Attack on Thrust Distribution over the Propeller Disk in Relation to Wake-Survey Measurement of Thrust. ARR L5J02b (WR L-517), Nov. 1945.
- Ribner, Herbert S. and MacLachlan, Robert: Effect of Slipstream Rotation in Producing Asymmetric Forces on a Fuselage. TN 1210, March 1947.
- Greenberg, J. Mayo: Some Considerations on an Airfoil in an Oscillating Stream. TN 1372, Aug. 1947.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Vogeley, A. W.: Calculation of the Effect of Thrust-Axis Inclination on Propeller Disk Loading and Comparison with Flight Measurements. TN 1721, Oct. 1948.
- Weil, Joseph and Sleeman, William C., Jr.: Prediction of the Effects of Propeller Operation on the Static Longitudinal Stability of Single-Engine Tractor Monoplanes with Flaps Retracted. TN 1722, Oct. 1948.
- Johnson, Harold S.: Wind-Tunnel Investigation of Effects of Tail Length on the Longitudinal and Lateral Stability Characteristics of a Single-Propeller Airplane Model. TN 1766, Dec. 1948.

DIAMETER (1.5.2.10)

Weil, Joseph and Sleeman, William C., Jr.: Prediction of the Effects of Propeller Operation on the Static Longitudinal Stability of Single-Engine Tractor Monoplanes with Flaps Retracted. TN 1722, Oct. 1948.

DESIGNATED TYPES

(1.5.3)

Variable Pitch Propellers - Translated from L'Aeronautique, Sept. 30, 1920. TM 2, Nov. 1920.

- Designated Types (Cont.)
- Bacon, David L.: The "Universal Propeller" Built by Paragon Engineers, Inc., Baltimore, Md. TM 70, March 1922.
- The "Universal" Adjustable and Reversible Propeller Built by Paragon Engineers, Inc., Baltimore, Md. TM 155, Nov. 1922.
- Pistolesi, Enrico: Variable Pitch Propeller. TM 216, July 1923.
- Sachse, H.: Kirsten-Boeing Propeller. TM 351, Feb. 1926.
- Léglise, Pierre: Ratier Metal Propeller with Pitch Variable in Flight. TM 559. April 1930.
- Léglise, Pierre: The Benuzzi Automatic Variable-Pitch Propeller. MP 29, Sept. 1931.
- Pillard, M.: Paulhan-Pillard Free-Wheel Propeller. MP 31, Oct. 1931.
- Stipa, L.: Experiments with Intubed Propellers. TM 655, Jan. 1932.
- Valentine, E. Floyd: Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. V - Clark Y Biplane Cellule - NACA Cowled Nacelle - Tractor Propeller. Rept. 506, 1934.
- Wood, Donald H. and Bioletti, Carlton:
 Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. VI Wings and Nacelles with Pusher Propeller.
 Rept. 507, 1934.
- Theodorsen, Theodore; Stickle, George W. and Brevoort, M. J.: Characteristics of Six Propellers Including the High-Speed Range. Rept. 594, 1937.
- Hartman, Edwin P. and Biermann, David: The Aerodynamic Characteristics of Four Full-Scale Propellers Having Different Plan Forms. Rept. 643, 1938.
- Gropp, H.: Engines and Propellers for Powered Gliders and Light Airplanes. TM 850, March 1938.
- Corson, Blake W., Jr. and Mastrocola, Nicholas: Static Characteristics of Hamilton Standard Propellers Having Clark Y and NACA 16-Series Blade Sections. MR (WR L-529), Aug. 1941.
- Gray, W. H.: Wind-Tunnel Tests of Two Hamilton Standard Propellers Embodying Clark Y and NACA 16-Series Blade Sections. MR (WR L-530), Aug. 1941.

- Corson, Blake W., Jr. and Mastrocola, Nicholas: Static Characteristics of Curtiss Propellers Having Different Blade Sections. MR (WR L-568), Aug. 1941.
- Gray, W. H.: Wind-Tunnel Tests of Four Curtiss Propellers Embodying Different Blade Sections. MR (WR L-569), Aug. 1941.
- Biermann, David and Hartman, Edwin P.: Wind-Tunnel Tests of Four- and Six-Blade Single- and Dual-Rotating Tractor Propellers. Rept. 747, 1942.
- Valentine, E. Floyd and Mastrocola, Nicholas: Wind Tunnel Tests of Wickwire-Spencer Propeller. MR (WR L-770), March 1942.
- Vogeley, A. W.: Flight Measurements of Compressibility Effects on a Two-Blade Thin Clark Y Propeller. ACR 3K06, Nov. 1943.
- Stack, John; Draley, Eugene C.; Delano, James B. and Feldman, Lewis: Investigation of Two-Blade Propellers at High Forward Speeds in the NACA 8-Foot High-Speed Tunnel. I Effects of Compressibility. NACA 4-308-03 Blade. ACR 4A10, Jan. 1944.
- McHugh, James G. and Pepper, Edward:
 The Propeller and Cooling-Air-Flow
 Characteristics of a Twin-Engine Airplane Model Equipped with NACA DsType Cowlings and with Propellers
 of NACA 16-Series Airfoil Sections.
 ACR L4I20 (WR L-638), Sept. 1944.
- Vogeley, A. W.: Climb and High-Speed Tests of a Curtiss No. 714-1C2-12 Four-Blade Propeller on the Republic P-47C Airplane. ACR L4L07 (WR L-177), Dec. 1944.
- Gray, W. H. and Davidson, R. E.: The
 Effect of Tip Modification and Thermal
 De-Icing Air Flow on Propeller Performance as Determined from WindTunnel Tests. TN 1540, Feb. 1948.
- Lewis, James P. and Stevens, Howard C., Jr.: Icing and De-Icing of a Propeller with Internal Electric Blade Heaters. TN 1691, Aug. 1948.

SLIPSTREAM

(1.5.4)

- Warner, Edward P.: Slip-Stream Corrections in Performance Computation. Rept. 71, 1920.
- Prandtl, L.: Mutual Influence of Wings and Propellers. TN 74, Dec. 1921.

- Munk, Max M.: Analysis of W. F. Durand's and E. P. Lesley's Propeller Tests. Rept. 175, 1923.
- Munk, Max M.: Reduction in Efficiency of Propellers Due To Slipstream. TN 170, Dec. 1923.
- Lesley, E. P. and Woods, B. M.: The Effect of Slipstream Obstructions on Air Propellers. Rept. 177, 1924.
- Munk, Max M.: The Analysis of Free Flight Propeller Tests and Its Application to Design. Rept. 183, 1924.
- Crowley, J. W., Jr.: Investigation of Slipstream Velocity. Rept. 194, 1924.
- Ackeret, J.: Recent Experiments at the Gottingen Aerodynamic Institute. TM 323, July 1925.
- Durand, W. F. and Lesley, E. P.: Comparison of Tests on Airplane Propellers in Flight with Wind Tunnel Model Tests on Similar Forms. Rept. 220, 1926.
- Durand, W. F.: Interaction Between Air Propellers and Airplane Structures. Rept. 235, 1926.
- Montieth, Charles N.: Slip Stream Effect. TM 355, March 1926.
- De Caria, Ugo: Counter-Propeller. TM 587, Oct. 1930.
- Thompson, F. L. and Keister, P. H.: Lift and Drag Characteristics of a Cabin Monoplane Determined in Flight. TN 362, Jan. 1931.
- Stickle, George W.: Measurement of the Differential and Total Thrust and Torque of Six Full-Scale Adjustable-Pitch Propellers. Rept. 421, 1932.
- Wheatley, John B.: Wing Pressure Distribution and Rotor-Blade Motion of an Autogiro as Determined in Flight. Rept. 475, 1933.
- Lesley, E. P.: Experiments with a Counter-Propeller. TN 453, March 1933.
- White, James A. and Hood, Manley J.:
 Wing-Fuselage Interference Tail Buffeting, and Air Flow About the Tail of a Low-Wing Monoplane. Rept. 482, 1934.
- Windler, Ray: Tests of a Wing-Nacelle-Propeller Combination at Several Pitch Settings up to 42°. Rept. 564, 1936.

- Robinson, Russell G. and Herrnstein, William H., Jr.: Wing-Nacelle-Propeller Interference for Wings of Various Spans Force and Pressure-Distribution Tests. Rept. 569, 1936.
- Ferrari, C.: Some Experiments on the Slipstream Effect. TM 820, March 1937.
- Soulé, H. A. and Hootman, James A.: Flight Tests of an Airplane Showing Dependence of the Maximum Lift Coefficient on the Test Conditions. TN 622, Nov. 1937.
- Hartman, Edwin P.: Wind-Tunnel Tests of a 2-Engine Airplane Model as a Preliminary Study of Flight Conditions Arising on the Failure of One Engine. TN 646, April 1938.
- Stuper, J.: Effect of Fropeller Slipstream of Wing and Tail. TM 874, Aug. 1938.
- Muttray, H.: Investigations on the Downwash Behind a Tapered Wing with Fuselage and Propeller. TM 876, Sept. 1938.
- Benson, William M.: Tests of a Contra-Propeller for Aircraft. TN 677, Nov. 1938.
- McHugh, James G. and Derring, Eldridge H.: The Effect of Nacelle-Propeller Diameter Ratio on Body Interference and on Propeller and Cooling Characteristics. Rept. 680, 1939.
- Diehl, Walter S.: Some Fundamental Considerations in Regard to the Use of Power in Landing an Airplane. TN 692, March 1939.
- Betz, Albert: The Theory of Contra-Vanes Applied to the Propeller. TM 909, Sept. 1939.
- Hood, Manley J. and Gaydos, M. Edward: Effects of Propellers and of Vibration on the Extent of Laminar Flow on the NACA 27-212 Airfoil. ACR (WR L-784), Oct. 1939.
- Franke, A. and Weinig, F.: The Effect of the Slipstream on an Airplane Wing. TM 920, Nov. 1939.
- Katzoff, S.: Longitudinal Stability and Control with Special Reference to Slipstream Effects. Rept. 690, 1940.
- Stickle, George W. and Crigler, John L.: Propeller Analysis from Experimental Data. Rept. 712, 1941.
- Goett, Harry J. and Pass, R. R.: Effect of Propeller Operation on the Pitching Moments of Single-Engine Monoplanes. ACR (WR L-761), May 1941.

Slipstream (Cont.)

- Lowry, John G. and Toll, Thomas A.:
 Power-On Longitudinal-Stability and
 Control Tests of the 1/8-Scale Model
 of the Brewster F2A Airplane Equipped
 with Full-Span Slotted Flaps and a
 New Horizontal Tail. MR (WR L-709),
 March 1942.
- Delany, Noel K.: Effects of Direction of Propeller Rotation on the Longitudinal Stability of the 1/10-Scale Model of the North American XB-28 Airplane with Flaps Neutral. ACR, June 1942.
- Pass, H. R.: Wind-Tunnel Study of the Effects of Propeller Operation and Flap Deflection on the Pitching Moments and Elevator Hinge Moments of a Single-Engine Pursuit-Type Airplane. ARR (WR L-411), July 1942.
- Sweberg, Harold H.: The Effect of Propeller Operation on the Air Flow in the Region of the Tail Plane for a Twin-Engine Tractor Monoplane. ARR (WR L-381), Aug. 1942.
- Recant, I. G. and Wallace, A. R.: Effect of Ground on Characteristics of a Model of a Low-Wing Airplane with Full-Span Slotted Flap with and Without Power. ARR (WR L-335), Sept. 1942.
- Wilson, Herbert A., Jr.: Full-Scale-Tunnel Investigation of a Multiengine Pusher-Propeller Installation. ARR (WR L-246), Nov. 1942.
- Donlan, Charles J.: Some Theoretical Considerations of Longitudinal Stability in Power-On Flight with Special Reference to Wind-Tunnel Testing. ARR (WR L-309), Nov. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Bailey, F. J., Jr. and Johnston, J. Ford:
 Flight Investigation of NACA DS Cowlings on the XP-42 Airplane. I High-Inlet-Velocity Cowling with Propeller Cuffs Tested in High-Speed Level Flight. ARR (WR L-383), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA D_S Cowlings on the XP-42 Airplane. II Low-Inlet-Velocity Cowling with Axial-Flow Fan and Propeller Cuffs. ARR (WR L-243), Jan. 1943.

- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. III Low-Inlet-Velocity Cowling Without Fan or Propeller Cuffs, with Axial-Flow Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR (WR L-508), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. IV High-Inlet-Velocity Cowling Tested in
 Climb with and Without Propeller
 Cuffs and in High-Speed Level Flight
 Without Propeller Cuffs. ARR (WR
 L-285), Jan. 1943.
- Sweberg, Harold H.: Air-Flow Surveys in the Region of the Tail Surfaces of a Single-Engine Airplane Equipped with Dual-Rotating Propellers. ACR (WR L-424), March 1943.
- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.:
 Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3I30 (WR W-6), Sept. 1943.
- Nelson, W. J. and Czarnecki, K. R.: Wind-Tunnel Investigation of Wing Ducts on a Single-Engine Pursuit Airplane. ARR 3J13 (WR L-407), Oct. 1943.
- Theodorsen, Theodore: The Theory of Propellers. II - Method for Calculating the Axial Interference Velocity. Rept. 776, 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Effects of Propeller Operation and Angle of Yaw on the Distribution of the Load on the Horizontal Tail Surface of a Typical Pursuit Airplane. ARR 4B10 (WR L-227), Feb. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Some Effects of Propeller Operation on the Distribution of the Load on the Vertical Tail Surface of a Typical Pursuit Airplane. RB 4C13 (WR L-426), March 1944.
- Harper, Charles W. and Wick, Bradford H.: A Comparison of the Effects of Four-Blade Dual- and Single-Rotation Propellers on the Stability and Control Characteristics of a High-Powered Single-Engine Airplane. ARR 4F17 (WR A-43), June 1944.
- White, Maurice D.: Effect of Fower on the Stick-Fixed Neutral Points of Several Single-Engine Monoplanes as Determined in Flight. CB L4H01 (WR L-24), Aug. 1944.

Slipstream (Cont.)

- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Bartlett, Walter A., Jr.: Wind-Tunnel Tests of a Dual-Rotating Propeller Having One Component Locked or Windmilling. ARR L5A13a (WR L-214), Jan. 1945.
- Chapman, Dean R.: Investigation of Slipstream Effects on a Wing-Inlet Oil-Cooler Ducting System of a Twin-Engine Airplane in the Ames 40- by 80-Foot Wind Tunnel. MR A5C10 (WR A-1), March 1945.
- Coleman, Robert P.; Feingold, Arnold M. and Stempin, Carl W.: Evaluation of the Induced-Velocity Field of an Idealized Helicopter Rotor. ARR L5E10 (WR L-126), June 1945.
- Pendley, Robert E.: Effect of Propeller-Axis Angle of Attack on Thrust Distribution over the Propeller Disk in Relation to Wake-Survey Measure-ment of Thrust. ARR L5J02b (WR L-517), Nov. 1945.
- Reid, Elliott G.: Wake Studies of Eight Model Propellers. TN 1040, July 1946.
- Gasich, Welko E.: Experimental Verification of Two Methods for Computing the Take-Off Ground Run of Propeller-Driven Aircraft. TN 1258, June 1947.
- Purser, Paul E. and Spear, Margaret F .: Wind-Tunnel Investigation of Effects of Unsymmetrical Horizontal-Tail Arrangements on Power-On Static Longitudinal Stability of a Single-Engine Airplane Model. TN 1474, Oct. 1947.
- Gilman, Jean, Jr.: Wind-Tunnel Tests and Analysis of Two 10-Foot-Diameter Six-Blade Dual-Rotating Tractor Propellers Differing in Pitch Distribution. TN 1634, June 1948.
- Weil, Joseph and Sleeman, William C., Jr.: Prediction of the Effects of Propeller Operation on the Static Longitudinal Stability of Single-Engine Tractor Monoplanes with Flaps Retracted. TN 1722, Oct. 1948.

- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Lange, Roy H.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.

OPERATING CONDITIONS

- Vogeley, A. W.: Flight Measurements of Compressibility Effects on a Two-Blade Thin Clark Y Propeller. ACR 3K06, Nov. 1943.
- Lewis, James P.: De-Icing Effectiveness of External Electric Heaters for Propeller Blades. TN 1520, Feb. 1948.
- Davis, Don D., Jr. and Sweberg, Harold H.: Investigation of Some Factors Affecting Comparisons of Wind-Tunnel and Flight Measurements of Maximum Lift Coefficients for a Fighter-Type Airplane. TN 1639, June 1948.
- Vogeley, A. W.: Sound-Level Measurements of a Light Airplane Modified to Reduce Noise Reaching the Ground. TN 1647, July 1948.
- Lewis, James P. and Stevens, Howard C., Jr.: Icing and De-Icing of a Propeller with Internal Electric Blade Heaters. TN 1691, Aug. 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Weil, Joseph and Sleeman, William C., Jr.: Prediction of the Effects of Propeller Operation on the Static Longitudinal Stability of Single-Engine Tractor Monoplanes with Flaps Retracted. TN 1722, Oct. 1948.
- Hammack, Jerome B.: Flight Investigation in Climb and at High Speed of a Two-Blade and a Three-Blade Propeller. TN 1784, Jan. 1949.
- Perkins, Porter J. and Millenson, Morton B.: An Electric Thrust Meter Suitable for Flight Investigation of Propellers. RM E9C17, May 1949.
- Lange, Roy H.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.

Rotors

(1.6)

Gessow, Alfred: Standard Symbols for Helicopters. TN 1604, June 1948.

THEORY

(1.6.1)

- Warner, E. P.: The Problem of the Helicopter. TN 4, May 1920.
- Toussaint, A.: Drag or Negative Traction of Geared-Down Supporting Propellers in the Downward Vertical Glide of a Helicopter. TN 21, Sept. 1920.
- Munk, Max M.: General Theory of Windmills. TN 164, Oct. 1923.
- Klemin, Alexander: An Introduction to the Helicopter. TM 340, 1925.
- Bennett, J. A. J.: Vertical Descent of the Autogiro. TM 673, June 1932.
- Wheatley, John B.: Simplified Aerodynamic Analysis of the Cyclogiro Rotating-Wing System. TN 467, Aug. 1933.
- Strandgren, C. B.: The Theory of the Strandgren Cyclogiro. TM 727, Nov. 1933.
- Bennett, J. A. J.: The Flight of an Autogiro at High Speed. TM 729, Dec. 1933.
- Schrenk, Martin: Aerodynamic Principles of the Direct Lifting Propeller. TM 733, Jan. 1934.
- Wheatley, John B.: The Aerodynamic Analysis of the Gyroplane Rotating-Wing System. TN 492, March 1934.
- Wheatley, John B.: A Study of Autogiro Rotor-Blade Oscillations in the Plane of the Rotor Disk. TN 581, Sept. 1936.
- Wheatley, John B. and Bioletti, Carlton: Analysis and Model Tests of Autogiro Jump Take-Off. TN 582, Oct. 1936.
- Wheatley, John B.: An Analytical and Experimental Study of the Effect of Periodic Blade Twist on the Thrust, Torque, and Flapping Motion of an Autogiro Rotor. Rept. 591, 1937.

- Wheatley, John B.: An Analysis of the Factors that Determine the Periodic Twist of an Autogiro Rotor Blade, with a Comparison of Predicted and Measured Results. Rept. 600, 1937.
- Kussner, H. G.: Helicopter Problems. TM 827, May 1937.
- Betz, A.: The Ground Effect on Lifting Propellers. TM 836, Aug. 1937.
- Knight, Montgomery and Hefner, Ralph A.: Static Thrust Analysis of the Lifting Airscrew. TN 626, Dec. 1937.
- Bailey, F. J., Jr.: A Study of the Torque Equilibrium of an Autogiro Rotor. Rept. 623, 1938.
- Hohenemser, K.: Performance of Rotating-Wing Aircraft. TM 871, July 1938.
- Sissingh, G.: Contribution to the Aerodynamics of Rotating-Wing Aircraft. TM 921, Dec. 1939.
- Bailey, F. J., Jr. and Gustafson, F. B.: Observations in Flight of the Region of Stalled Flow over the Blades of an Autogiro Rotor. TN 741, Dec. 1939.
- Pflüger, A.: Aerodynamics of Rotating-Wing Aircraft with Blade-Pitch Control. TM 929, Feb. 1940.
- Bailey, F. J., Jr.: A Simplified Theoretical Method of Determining the Characteristics of a Lifting Rotor in Forward Flight. Rept. 716, 1941.
- Sissingh, G.: Contribution to the Aerodynamics of Rotating-Wing Aircraft. Part II. TM 990, Oct. 1941.
- Knight, Montgomery and Hefner, Ralph A.: Analysis of Ground Effect on the Lifting Airscrew. TN 835, Dec. 1941.
- Coleman, Robert P.: Theory of Self-Excited Mechanical Oscillations of Hinged Rotor Blades. ARR 3G29, July 1943.
- Gustafson, F. B.: Effect on Helicopter Performance of Modifications in Profile-Drag Characteristics of Rotor-Blade Airfoil Sections. ACR L4H05, Aug. 1944.

Theory (Cont.)

- Bailey, F. J., Jr. and Gustafson, F. B.: Charts for Estimation of the Characteristics of a Helicopter Rotor in Forward Flight. I - Profile Drag-Lift Ratio for Untwisted Rectangular Blades. ACR L4H07, Aug. 1944.
- Kelley, Bartram: Response of Helicopter Rotors to Periodic Forces. ARR 5A09, March 1945.
- Coleman, Robert P.; Feingold, Arnold M. and Stempin, Carl W.: Evaluation of the Induced-Velocity Field of an Idealized Helicopter Rotor. ARR L5E10, June 1945.
- Talkin, Herbert W.: Charts for Helicopter-Performance Estimation. ACR L5E04, Aug. 1945.
- Duberg, John E. and Luecker, Arthur R.: Comparisons of Methods of Computing Bending Moments in Helicopter Rotor Blades in the Plane of Flapping. ARR L5E23, Aug. 1945.
- Talkin, Herbert W.: Charts Showing Relations Among Primary Aerodynamic Variables for Helicopter-Performance Estimation. TN 1192, Feb. 1947.
- Coleman, Robert P. and Stempin, Carl W.: A Preliminary Theoretical Study of Aerodynamic Instability of a Two-Blade Helicopter Rotor. RM L6H23, March 1947.
- Dingeldein, Richard C. and Schaefer, Raymond F.: Full-Scale Investigation of the Aerodynamic Characteristics of a Typical Single-Rotor Helicopter in Forward Flight. TN 1289, May 1947.
- Gessow, Alfred: Effect of Rotor-Blade Twist and Plan-Form Taper on Helicopter Hovering Performance. TN 1542, Feb. 1948.
- Gustafson, F. B. and Reeder, J. P.: Helicopter Stability. RM L7K04, April 1948.
- Gustafson, F. B. and Gessow, Alfred: Analysis of Flight-Performance Measurements on a Twisted, Plywood-Covered Helicopter Rotor in Various Flight Conditions. TN 1595, June 1948.
- Gessow, Alfred: Standard Symbols for Helicopters. TN 1604, June 1948.
- Gessow, Alfred: Bibliography of NACA Papers on Rotating-Wing Aircraft June 1948. RM L7J30, July 1948.

- Carpenter, Paul J.: Effect of Wind Velocity on Performance of Helicopter Rotors as Investigated with the Langley Helicopter Apparatus. TN 1698, Oct. 1948.
- Reissner, H. and Morduchow, M.: A
 Theoretical Study of the Dynamic
 Properties of Helicopter-Blade Systems. TN 1430, Nov. 1948.
- Gustafson, F. B.: The Application of Airfoil Studies to Helicopter Rotor Design. TN 1812, Feb. 1949.
- Carpenter, Paul J. and Peitzer, Herbert E.: Response of a Helicopter Rotor to Oscillatory Pitch and Throttle Movements. TN 1888, June 1949.
- Nikolsky, A. A. and Seckel, Edward: An Analytical Study of the Steady Vertical Descent in Autorotation of Single-Rotor Helicopters. TN 1906, June 1949.
- Nikolsky, A. A. and Seckel, Edward: An Analysis of the Transition of a Helicopter from Hovering to Steady Autorotative Vertical Descent. TN 1907, June 1949.

EXPERIMENTAL STUDIES

(1.6.2)

- Schrenk, Martin: Aerodynamic Principles of the Direct Lifting Propeller. TM 733, Jan. 1934.
- Stivers, Louis S., Jr. and Rice, Fred J., Jr.: Aerodynamic Characteristics of Four NACA Airfoil Sections Designed for Helicopter Rotor Blades. RB L5K02 (WR L-29), Feb. 1946.
- Gessow, Alfred: Flight Investigation of Effects of Rotor-Blade Twist on Helicopter Ferformance in the High-Speed and Vertical-Autorotative-Descent Conditions. TN 1666, Aug. 1948.
- Carpenter, Paul J.: Effect of Wind Velocity on Performance of Helicopter Rotors as Investigated with the Langley Helicopter Apparatus. TN 1698, Oct. 1948.

POWER DRIVEN (1.6.2.1)

- Toussaint, A.: Drag or Negative Traction of Geared-Down Supporting Propellers in the Downward Vertical Glide of a Helicopter. TN 21, Sept. 1920.
- Paris Office, NACA: Recent European Developments in Helicopters. TN 47, April 1921.

- Power Driven Experimental Studies (Cont.)
- Rizzo, Frank: The Flettner Rotor Ship in the Light of the Kutta-Joukowski Theory and of Experimental Results. TN 228, Oct. 1925.
- Flachsbart, O. and Krober, G.: Experimental Investigation of Aircraft Propellers Exposed to Oblique Air Currents. TM 562, April 1930.
- Wheatley, John B.: Simplified Aerodynamic Analysis of the Cyclogiro Rotating-Wing System. TN 467, Aug. 1933.
- Wheatley, John B. and Windler, Ray: Wind-Tunnel Tests of a Cyclogiro Rotor. TN 528, May 1935.
- Wheatley, John B. and Bioletti, Carlton: Analysis and Model Tests of Autogiro Jump Take-Off. TN 582, Oct. 1936.
- Kussner, H. G.: Helicopter Problems. TM 827, May 1937.
- Betz, A.: The Ground Effect on Lifting Propellers. TM 836, Aug. 1937.
- Knight, Montgomery and Hefner, Ralph A.: Static Thrust Analysis of the Lifting Airscrew. TN 626, Dec. 1937.
- Sissingh, G.: Contribution to the Aerodynamics of Rotating-Wing Aircraft. Part II. TM 990, Oct. 1941.
- Knight, Montgomery and Hefner, Ralph A.: Analysis of Ground Effect on the Lifting Airscrew. TN 835, Dec. 1941.
- Gustafson, F. B.: Effect on Helicopter Performance of Modifications in Profile-Drag Characteristics of Rotor-Blade Airfoil Sections. ACR L4H05, Aug. 1944.
- Bailey, F. J., Jr. and Gustafson, F. B.: Charts for Estimation of the Characteristics of a Helicopter Rotor in Forward Flight. I - Profile Drag-Lift Ratio for Untwisted Rectangular Blades. ACR L4H07, Aug. 1944.
- Bailey, F. J., Jr. and Voglewede, T. J.:
 An Estimate of the Effect of Engine
 Supercharging on the Take-Off Thrust
 of a Typical Helicopter at Different
 Altitudes and Temperatures. TED
 No. NACA 1301. MR L5C12b (WR
 L-592), March 1945.
- Kelley, Bartram: Response of Helicopter Rotors to Periodic Forces. ARR 5A09, March 1945.
- Talkin, Herbert W.: Charts for Helicopter-Performance Estimation. ACR L5E04, Aug. 1945.

- Duberg, John E. and Luecker, Arthur R.: Comparisons of Methods of Computing Bending Moments in Helicopter Rotor Blades in the Plane of Flapping. ARR L5E23, Aug. 1945.
- Dingeldein, Richard C. and Schaefer, Raymond F.: Static-Thrust Tests on Six Rotor-Blade Designs on a Helicopter in the Langley Full-Scale Tunnel. ARR L5F25b, Sept. 1945.
- Gustafson, F. B. and Myers, G. C., Jr.: Stalling of Helicopter Blades. Rept. 840, 1946.
- Stivers, Louis S., Jr. and Rice, Fred J., Jr.: Aerodynamic Characteristics of Four NACA Airfoil Sections Designed for Helicopter Rotor Blades. RB L5K02 (WR L-29), Feb. 1946.
- Gustafson, F. B. and Gessow, Alfred: Effect of Rotor-Tip Speed on Helicopter Hovering Performance and Maximum Forward Speed. ARR L6A16, March 1946.
- Coleman, Robert F. and Feingold, Arnold M.: Theory of Ground Vibrations of a Two-Blade Helicopter Rotor on Anisotropic Flexible Supports. TN 1184, Jan. 1947.
- Gustafson, F. B. and Gessow, Alfred: Effect of Blade Stalling on the Efficiency of a Helicopter Rotor as Measured in Flight. TN 1250, April 1947.
- Myers, Garry C., Jr.: Flight Measurements of Helicopter Blade Motion with a Comparison Between Theoretical and Experimental Results. TN 1266, April 1947.
- Dingeldein, Richard C. and Schaefer, Raymond F.: Full-Scale Investigation of the Aerodynamic Characteristics of a Typical Single-Rotor Helicopter in Forward Flight. TN 1289, May 1947.
- Migotsky, Eugene: Full-Scale Investigation of the Blade Motion of the PV-2
 Helicopter Rotor. TN 1521, March
 1948.
- Gustafson, F. B. and Reeder, J. P.: Helicopter Stability. RM L7K04, April 1948.
- Gustafson, F. B. and Gessow, Alfred: Analysis of Flight-Performance Measurements on a Twisted, Plywood-Covered Helicopter Rotor in Various Flight Conditions. TN 1595, June 1948.
- Gessow, Alfred: Bibliography of NACA Papers on Rotating-Wing Aircraft June 1948. RM L7J30, July 1948.

- Power Driven Experimental Studies (Cont.)
- Gessow, Alfred: Flight Investigation of Effects of Rotor-Blade Twist on Helicopter Performance in the High-Speed and Vertical-Autorotative-Descent Conditions. TN 1666, Aug. 1948.
- Carpenter, Paul J.: Effect of Wind Velocity on Performance of Helicopter Rotors as Investigated with the Langley Helicopter Apparatus. TN 1698, Oct. 1948.
- Reeder, John P. and Gustafson, F. B.: On the Flying Qualities of Helicopters. TN 1799, Jan. 1949.
- Gustafson, F. B.: The Application of Airfoil Studies to Helicopter Rotor Design. TN 1812, Feb. 1949.
- Carpenter, Paul J. and Peitzer, Herbert E.: Response of a Helicopter Rotor to Oscillatory Pitch and Throttle Movements. TN 1888, June 1949.

AUTOROTATING (1.6.2.2)

- Lame, M.: Abstracts from the French Technical Press. Study of the Resistance Offered by Propellers Rotating on an Airstream. TM 21, April 1921.
- Munk, Max M.: Wind Driven-Propellers. TM 201, April 1923.
- Moreno-Caracciolo, M.: The "Autogiro." TM 218, July 1923.
- Munk, Max M.: Model Tests on the Economy and Effectiveness of Helicopter Propellers. TN 221, July 1925.
- Anderlik, E.: Experiments on Autorotation. TM 380, Sept. 1926.
- Seiferth, R.: Testing a Windmill Airplane ("Autogiro"). TM 394, Jan. 1927.
- Bennett, J. A. J.: Vertical Descent of the Autogiro. TM 673, June 1932.
- Wheatley, John B.: Wing Pressure Distribution and Rotor-Blade Motion of an Autogiro as Determined in Flight. Rept. 475, 1933.
- Wheatley, John B.: Simplified Aerodynamic Analysis of the Cyclogiro Rotating-Wing System. TN 467, Aug. 1933.
- Wheatley, John B.: An Aerodynamic Analysis of the Autogiro Rotor with a Comparison Between Calculated and Experimental Results. Rept. 487, 1934.
- Peck, William C.: Landing Characteristics of an Autogiro. TN 508, Nov. 1934.
- Wheatley, John B. and Hood, Manley J.: Full-Scale Wind-Tunnel Tests of a PCA-2 Autogiro Rotor. Rept. 515, 1935.

- Wheatley, John B.: The Influence of Wing Setting on the Wing Load and Rotor Speed of a PCA-2 Autogiro as Determined in Flight. Rept. 523, 1935.
- Wheatley, John B. and Bioletti, Carlton: Wind-Tunnel Tests of a 10-Foot-Diameter Gyroplane Rotor. Rept. 536, 1935.
- Wheatley, John B. and Bioletti, Carlton: Wind-Tunnel Tests of 10-Foot-Diameter Autogiro Rotors. Rept. 552, 1936.
- Wheatley, John B.: A Study of Autogiro Rotor-Blade Oscillations in the Plane of the Rotor Disk. TN 581, Sept. 1936.
- Wheatley, John B. and Bioletti, Carlton: Analysis and Model Tests of Autogiro Jump Take-Off. TN 582, Oct. 1936.
- Wheatley, John B.: An Analytical and Experimental Study of the Effect of Periodic Blade Twist on the Thrust, Torque, and Flapping Motion of an Autogiro Rotor. Rept. 591, 1937.
- Wheatley, John B.: An Analysis of the Factors that Determine the Periodic Twist of an Autogiro Rotor Blade, with a Comparison of Predicted and Measured Results. Rept. 600, 1937.
- Bailey, F. J., Jr. and Gustafson, F. B.: Observations in Flight of the Region of Stalled Flow over the Blades of an Autogiro Rotor. TN 741, Dec. 1939.
- Sissingh, G.: Contribution to the Aerodynamics of Rotating-Wing Aircraft. Part II. TM 990, Oct. 1941.
- Stivers, Louis S., Jr. and Rice, Fred J., Jr.: Aerodynamic Characteristics of Four NACA Airfoil Sections Designed for Helicopter Rotor Blades. RB L5K02 (WR L-29), Feb. 1946.
- Gessow, Alfred and Myers, Garry C., Jr.: Flight Tests of a Helicopter in Autorotation, Including a Comparison with Theory. TN 1267, April 1947.
- Gustafson, F. B. and Gessow, Alfred:
 Analysis of Flight-Performance
 Measurements on a Twisted, PlywoodCovered Helicopter Rotor in Various
 Flight Conditions. TN 1595, June 1948.
- Gessow, Alfred: Bibliography of NACA Papers on Rotating-Wing Aircraft June 1948. RM L7J30, July 1948.
- Gessow, Alfred: Flight Investigation of Effects of Rotor-Blade Twist on Helicopter Performance in the High-Speed and Vertical-Autorotative-Descent Conditions. TN 1666, Aug. 1948.
- Gustafson, F. B.: The Application of Airfoil Studies to Helicopter Rotor Design. TN 1812, Feb. 1949.

Aircraft (1.7)

- Idrac, P.: Soaring Flight in Guinea. TN 13, Aug. 1920.
- Everling, E.: The Increase in Dimensions of Airplanes Weight, Area, and Loading of Wings. TN 132, March 1923.
- Langsdorff, Werner v.: Remarks on Building of Low-Powered Airplanes. TM 246, Jan. 1924.
- Compiled by the National Advisory Committee for Aeronautics: Light Airplanes of France, Germany, Italy, Belgium, Holland, Czechoslovakia and Lithuania. TM 301, Feb. 1925.
- Driggs, Ivan H.: The Light Airplane. Brief Review of the Results Obtained in the Development of Light Airplanes - I. Modern Theoretical Aerodynamics as Applied to Light Airplane Design - II. TM 311, April 1925.
- Lachmann, G.: Development of Light and Small Airplanes. TM 370, July 1926.
- Stepniewski, Wieslaw: Air Transport by Gliders - some Technical Observations. TM 980, June 1941.
- Pitkin, Marvin and McKinney, Marion O., Jr.: Theoretical Analysis of the Lateral Stability of a Glider Towed by twin Parallel Towlines. ARR 3K17, Nov. 1943.

AIRPLANES

(1.7.1)

- Margoulis, W.: The Paris Aeronautical Show, 1919. MP 1, Feb. 1920.
- Rateau, A.: Résumé of the Theory of Naval and Aerial Propulsive Propellers and of Airplanes in Rectilinear Flight. TM 17, April 1921.
- Two-Seat Light Airplanes Which Participated in Contest held at Lympne, England, Week of September 29 to October 4, 1924. TM 289, Nov. 1924.
- Weyl, A. R.: The Cells of Giant Airplanes. TM 478, Sept. 1928.
- Töpfer, Carl: Airplane Drag. TM 544, Dec. 1929.

- Thompson, F. L. and Keister, P. H.: Lift and Drag Characteristics of a Cabin Monoplane Determined in Flight. TN 362, Jan. 1931.
- Hunter, P. A. and Vensel, J. R.: A Flight Investigation to Increase the Safety of a Light Airplane. TN 1203, March 1947.

COMPONENTS IN COMBINATION (1.7.1.1.)

- Warner, Edward P.: Slip-Stream Corrections in Performance Computation. Rept. 71, 1920.
- Munk, Max and Molthan, Wilhelm: Tests on an Airplane Model, AEG DI of the Allgemeine Elektricitats Gesellschaft, A-G, Airplane Construction Section Conducted at the Gottingen Model Testing Laboratory for Aerodynamics. TN 128, Feb. 1923.
- Wieselsberger, C.: Air Resistance Measurements on Actual Airplane Parts. TN 169, Nov. 1923.
- Driggs, Ivan H.: The Light Airplane. TM 326, Aug. 1925.
- Weick, Fred E.: Full Scale Drag Tests on Various Parts of Sperry Messenger Airplane. TN 271, Jan. 1928.
- Weick, Fred E.: The Effect of the Sperry Messenger Fuselage on the Air Flow at the Propeller Plane. TN 274, Jan. 1928.
- Ober, Shatswell: Some Studies on the Aerodynamic Effect of the Gap Between Airplane Wings and Fuselages. TN 327, Nov. 1929.
- Herrnstein, William H., Jr.: Full Scale Drag Tests on Various Parts of Fairchild (FC-2W2) Cabin Monoplane. TN 340, May 1930.
- Blenk, Hermann: Gottingen Six-Component Scale Measurements on a Junkers A 35 Airplane Model. TM 586, Oct. 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Square Wing Tip on a Biplane in Flight. TN 360, Jan. 1931.
- Ward, Kenneth E.: Interference Effects and Drag of Struts on a Monoplane Wing. TN 365, Feb. 1931.

- Components in Combination Airplanes (Cont.)
- McAvoy, William H.; Schey, Oscar W. and Young, Alfred W .: The Effect on Airplane Performance of the Factors that Must Be Considered in Applying Low-Drag Cowling to Radial Engines. Rept. 414, 1932.
- Herrnstein, William H., Jr. and Biermann, David: The Drag of Airplane Wheels, Wheel Fairings and Landing Gears - I. Rept. 485, 1934.
- Biermann, David and Herrnstein, William H., Jr.: The Interference Between Struts in Various Combinations. Rept. 468, 1935.
- Biermann, David and Herrnstein, William H., Jr.: The Drag of Airplane Wheels, Wheel Fairings and Landing Gears. II - Nonretractable and Partly Retractable Landing Gears. Rept. 518, 1935.
- Herrnstein, William H., Jr. and Biermann, David: The Drag of Airplane Wheels, Wheel Fairings and Landing Gears - III. Rept. 522, 1935.
- Katzoff, S.: Longitudinal Stability and Control with Special Reference to Slipstream Effects. Rept. 690, 1940.
- Pass, H. R.: Analysis of Wind-Tunnel Data on Directional Stability and Control. TN 775, Sept. 1940.
- Dearborn, C. H. and Silverstein, Abe: Drag Analysis of Single-Engine Military Airplanes Tested in the NACA Full-Scale Wind Tunnel. ACR (WR L-489), Oct. 1940.
- Muse, Thomas C .: The Effect of Various Wing-Gun Installations on the Aerodynamic Characteristics of an Airplane Model Equipped with an NACA Low-Drag Wing. ACR, July 1941.
- Pass, H. R.: Wind-Tunnel Study of the Effects of Propeller Operation and Flap Deflection on the Pitching Moments and Elevator Hinge Moments of a Single-Engine Pursuit-Type Airplane. ARR (WR L-411), July 1942.
- Wenzinger, Carl J. and Sivells, James C .: Preliminary Wind-Tunnel Tests of the Effect of Nacelles on the Characteristics of a Twin-Engine Bomber Model with Low-Drag Wing. ACR, July 1942.
- Pepper, Edward: Wind-Tunnel Tests of Several Arrangements of External Auxiliary Fuel Tanks on a Fighter-Type Airplane. ACR (WR L-371), Aug. 1942.

- Recant, I. G. and Wallace, A. R.: Effect of Ground on Characteristics of a Model of a Low-Wing Airplane with Full-Span Slotted Flap with and Without Power. ARR (WR L-335), Sept. 1942.
- Donlan, C. J. and Letko, W.: The Effect of Cowling Shape on the Stability Characteristics of an Airplane. ARR (WR L-343), Sept. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Quinn, John H., Jr.: Summary of Data Relating to the Effects of Wing Machine-Gun and Cannon Installations on the Aerodynamic Characteristics of Airplanes. ACR L4L21 (WR L-158), Jan. 1945.
- Hanson, Frederick H., Jr.: The Effect of a Wing-Tip-Mounted Fuel Tank on the Aerodynamic Characteristics of a High-Speed Bomber Wing. ACR A5H06. Oct. 1945.
- Cotter, William E., Jr.: Summary and Analysis of Data on Damping in Yaw and Pitch for a Number of Airplane Models. TN 1080, May 1946.
- Rathert, George A., Jr.: Flight Investigation of the Effects on Airplane Static Longitudinal Stability of a Bungee and Engine-Tilt Modifications. TN 1260, May 1947.
- Gasich, Welko E.: Experimental Verification of Two Methods for Computing the Take-Off Ground Run of Propeller-Driven Aircraft. TN 1258, June 1947.
- McCullough, George B.; Wieberg, James A. and Gault, Donald E.: Stick-Fixed Stability and Control Characteristics of the Consolidated Vultee Model 240 Airplane as Estimated from Tests of a 0.092-Scale Powered Model. RM A7F19, June 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Longitudinal Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1339, July 1947.
- Jones, Robert T.: Estimated Lift-Drag Ratios at Supersonic Speed. TN 1350, July 1947.

- Components in Combination Airplanes (Cont.)
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1379, July 1947.
- McKee, John W. and Vogler, Raymond D.: Wind-Tunnel Tests of a 1/8-Scale Powered Model of the XTB3F-1 Airplane. TED No. NACA 2382. RM L7G17, Aug. 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- Sivells, James C. and Spooner, Stanley H.:
 Investigation in the Langley 19-Foot
 Pressure Tunnel of Two Wings of
 NACA 65-210 and 64-210 Airfoil
 Sections with Various Type Flaps.
 TN 1579, May 1948.
- Lowry, John G. and Riebe, John M.: Effect of Length-Beam Ratio on Aerodynamic Characteristics of Flying-Boat Hulls Without Wing Interference. TN 1686, Sept. 1948.
- Kempf, Günther: Moments of Cambered Round Bodies. TM 1227, Aug. 1949.

Wing-Fuselage (1.7.1.1.1.)

- Prandtl, L.: Effects of Varying the Relative Vertical Position of Wing and Fuselage. TN 75, Dec. 1921.
- Lennertz, J.: On the Mutual Reaction of Wings and Body. TM 400, Feb. 1927.
- Higgins, George J.; Diehl, W. S. and DeFoe, George L.: Tests on Models of Three British Airplanes in the Variable Density Wind Tunnel. Rept. 279, 1928.
- Gough, Melvin N.: The Effect of Fillets Between Wings and Fuselage on the Drag and Propulsive Efficiency of an Airplane. TN 299, Oct. 1928.
- Muttray, H.: Investigation of the Effect of the Fuselage on the Wing of a Low-Wing Monoplane. TM 517, June 1929.
- Vladea, Jon: Effect of Fuselage and Engine Nacelles on Some Aerodynamic Properties of an Airplane Wing. TM 736, Feb. 1934.
- Jacobs, Eastman N. and Ward, Kenneth E.: Interference of Wing and Fuselage from Tests of 209 Combinations in the NACA Variable-Density Tunnel. Rept. 540, 1935.

- Muttray, H.: The Aerodynamic Aspect of Wing-Fuselage Fillets. TM 764, Feb. 1935.
- Sherman, Albert: Interference of Wing and Fuselage from Tests of 28 Combinations in the NACA Variable-Density Tunnel. Rept. 575, 1936.
- Parsons, J. F.: Full-Scale Aerodynamic Characteristics of Fairchild 22 Airplane Equipped with a Cunningham-Hall Wing. MR, Feb. 1936.
- De Lajarte, A. Dufaure: Chief Characteristics and Advantages of Tailless Airplanes. TM 794, May 1936.
- Jacobs, Eastman N. and Sherman, Albert: Wing-Fuselage Interference - Comparison of Conventional and Airfoil-Type-Fuselage Combinations. ACR (WR L-509), March 1937.
- Sherman, Albert: Interference of Wing and Fuselage from Tests of 30 Combinations in the NACA Variable-Density Tunnel Combinations with Triangular and Elliptical Fuselages. ACR, June 1937.
- Abbott, I. H.: Fuselage-Drag Tests in the Variable-Density Wind Tunnel Simulating Streamline Bodies of Revolution, Fineness Ratio of 5. TN 614, Sept. 1937.
- Sherman, Albert: Interference of Wing and Fuselage from Tests of 18 Combinations in the NACA Variable-Density Tunnel Combinations with Split Flaps. TN 640, March 1938.
- Sherman, Albert: Interference of Wing and Fuselage from Tests of 17 Combinations in the NACA Variable-Density Tunnel - Combinations with Special Junctures. TN 641, March 1938.
- Sherman, Albert: Interference of Wing and Fuselage from Tests of Eight Combinations in the NACA Variable-Density Tunnel Combinations with Tapered Fillets and Straight-Side Junctures. TN 642, March 1938.
- Muttray, H.: Investigations on the Downwash Behind a Tapered Wing with Fuselage and Propeller. TM 876, Sept. 1938.
- Bamber, M. J. and House; R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics -II - Rectangular NACA 23012 Wing with a Circular Fuselage and a Fin. TN 730, Sept. 1939.

- Draley, Eugene C.: High-Speed Drag Tests of Several Fuselage Shapes in Combination with a Wing. ACR (WR L-542), Aug. 1940.
- Becker, John V. and Baals, Donald D.: Wind Tunnel Tests of a Submerged-Engine Fuselage Design. ACR (WR L-485), Oct. 1940
- House, Rufus O. and Wallace, Arthur R.: Wind-Tunnel Investigation of Effect of Interference on Lateral-Stability Characteristics of Four NACA 23012 Wings an Elliptical and a Circular Fuselage and Vertical Fins. Rept. 705, 1941.
- Recant, Isidore G. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of the Effect
 of Vertical Position of the Wing on the
 Side Flow in the Region of the Vertical
 Tail. TN 804, April 1941.
- Greenberg, Harry: Comparison of Vee-Type and Conventional Tail Surfaces in Combination with Fuselage and Wing in the Variable-Density Tunnel. TN 815, July 1941.
- Pepper, Perry A.: Minimum Induced Drag in Wing-Fuselage Interference. TN 812, Sept. 1941.
- Recant, I. G. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effect of
 Yaw on Lateral-Stability Characteristics. IV Symmetrically Tapered
 Wing with a Circular Fuselage Having
 a Wedge-Shaped Rear and a Vertical
 Tail. ARR (WR L-520), March 1942.
- Sweberg, Harold H.: The Effect of Propeller Operation on the Air Flow in the Region of the Tail Plane for a Twin-Engine Tractor Monoplane. ARR (WR L-381), Aug. 1942.
- Abbott, Ira H.: Interference Effects of Longitudinal Flat Plates on Low-Drag Airfoils. CB (WR L-660), Nov. 1942.
- Multhropp, H.: Aerodynamics of the Fuselage. TM 1036, Dec. 1942.
- Campbell, John P. and Hollingworth,
 Thomas A.: The Effect on Stability and
 Control of a Pusher Propeller Behind
 Conventional Tail Surfaces as Determined by Tests of a Powered Model in
 the Free-Flight Tunnel. ACR (WR L220), Jan. 1943.
- Delano, James B.: Pressure Distribution on the Fuselage of a Midwing Airplane Model at High Speeds. TN 890, Feb. 1943.

- Wallace, Arthur R. and Turner, Thomas R.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. V Symmetrically Tapered Wing with a Circular Fuselage Having a Horizontal and a Vertical Tail. ARR 3F23 (WR L-459), June 1943.
- Recant, I. G. and Wallace, A. R.: Effect of Single- and Dual-Rotating Propellers on Longitudinal Stability Characteristics of a 1/9-Scale Model of XP-62 Airplane with Flaps Retracted. ACR 3J29, Oct. 1943.
- Draley, Eugene C.: A Comparison at High Speed of the Aerodynamic Merits of Models of Medium Bombers Having Thickened Wing Roots and Having Wings with Nacelles. ACR 3L03 (WR L-390), Dec. 1943.
- Teplitz, Jerome: Effects of Small Angles of Sweep and Moderate Amounts of Dihedral on Stalling and Lateral Characteristics of a Wing-Fuselage Combination Equipped with Partial and Full-Span Double-Slotted Flaps. Rept. 800, 1944.
- Bielat, Ralph P.: Effect of Compressibility on Longitudinal Stability and Control of 1/5.5-Scale Model of Fighter Airplane. ACR L4J02, Oct. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Hollingworth, Thomas A.: Investigation of Effect of Sideslip on Lateral Stability Characteristics. II Rectangular Midwing on Circular Fuselage with Variations in Vertical-Tail Area and Fuselage Length with and Without Horizontal Tail Surface. ARR L5C13 (WR L-8), April 1945.
- Hollingworth, Thomas A.: Investigation of Effect of Sideslip on Lateral Stability Characteristics. III Rectangular Low Wing on Circular Fuselage with Variations in Vertical-Tail Area and Fuselage Length with and Without Horizontal Tail Surface. ARR L5C13a (WR L-17) April 1945.
- Neely, Robert H.; Fairbanks, Richard W. and Conner, D. William: Effects of Wing and Nacelle Modifications on Drag and Wake Characteristics of a Bomber-Type Airplane Model. ARR L5J05 (WR L-114), Dec. 1945.
- Shortal, Joseph A. and Maggin, Bernard: Effect of Sweepback and Aspect Ratio on Longitudinal Stability Characteristics of Wings at Low Speeds. TN 1093, July 1946.

- Wing-Fuselage Airplanes (Cont.)
- Watkins, Charles E.: The Streamline Pattern in the Vicinity of an Oblique Airfoil. TN 1231, March 1947.
- Lange, Roy H.: Langley Full-Scale-Tunnel Investigation of the Factors Affecting the Static Lateral-Stability Characteristics of a Typical Fighter-Type Airplane. RM L6L18, April 1947.
- Sherman, Albert: Interference of Wing and Fuselage from Tests of 30 Combinations with Triangular and Elliptical Fuselages in the NACA Variable-Density Tunnel. TN 1272, May 1947.
- Tamburello, Vito and Weil, Joseph: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1327, June 1947.
- Lange/Wacke: Test Report on Measurements on a Series of Tapered Wings of Small Aspect Ratio (Trapezoidal Wing with Fuselage). TM 1129, July 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- Spreiter, John R.: Aerodynamic Properties of Slender Wing-Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1662, July 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- MacLeod, Richard G.: Aerodynamic Characteristics of a Flying-Boat Hull Having a Length-Beam Ratio of 15 and a Warped Forebody. RM L9A03, Feb. 1949.
- Spreiter, John R.: Aerodynamic Properties of Cruciform-Wing and Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1897, June 1949.

Wing-Nacelle (1.7.1.1.2.)

Jacobs, Eastman N.: The Drag and Interference of a Nacelle in the Presence of a Wing. TN 320, Oct. 1929.

- Wood, Donald H.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings -I - Thick Wing - NACA Cowled Nacelle - Tractor Propeller. Rept. 415, 1932.
- Wood, Donald H.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. II - Thick Wing - Various Radial-Engine Cowlings - Tractor Propeller. Rept. 436, 1932.
- Windler, Ray: The Effect of Propellers and Nacelles on the Landing Speeds of Tractor Monoplanes. TN 420, May 1932.
- Wood, Donald H.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. III - Clark Y Wing - Various Radial-Engine Cowlings - Tractor Propeller. Rept. 462, 1933.
- McHugh, James G.: Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. IV - Thick Wing - Various Radial-Engine Cowlings - Tandem Propellers. Rept. 505, 1934.
- Valentine, E. Floyd: Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. V - Clark Y Biplane Cellule - NACA Cowled Nacelle - Tractor Propeller. Rept. 506, 1934.
- Wood, Donald H. and Bioletti, Carlton:
 Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. VI Wings and Nacelles with Pusher Propeller.
 Rept. 507, 1934.
- Wood, Donald H.: Wing-Nacelle-Propeller Tests - Comparative Tests of Liquid-Cooled and Air-Cooled Engine Nacelles. ACR, Jan. 1934.
- Vladea, Jon: Effect of Fuselage and Engine Nacelles on Some Aerodynamic Properties of an Airplane Wing. TM 736, Feb. 1934.
- Wood, Donald H. and Windler, Ray: The Effect of Lateral Inclination of the Thrust Axis and of Sweepback of the Leading Edge of the Wing on Propulsive and Net Efficiencies of a Wing-Nacelle-Propeller Combination. ACR, April 1935.
- Robinson, Russell G. and Herrnstein, William H., Jr.: Wing-Nacelle-Propeller Interference for Wings of Various Spans Force and Pressure-Distribution Tests. Rept. 569, 1936.

- Wing-Nacelle Airplanes (Cont.)
- Silverstein, Abe and Wilson, Herbert A.,
 Jr.: Aerodynamic Characteristics of a
 4-Engine Monoplane Showing Effects of
 Enclosing the Engines in the Wing and
 Comparisons of Tractor- and PusherPropeller Arrangements. ACR,
 April 1938.
- Silverstein, Abe and Wilson, Herbert A., Jr.: Aerodynamic Characteristics of a 4-Engine Monoplane Showing Comparison of Air-Cooled and Liquid-Cooled Engine Installations. ACR (WR L-471), July 1939.
- McHugh, James G.: Tests of Several Model Nacelle-Propeller Arrangements in Front of a Wing. ACR (WR L-510), Sept. 1939.
- Wilson, Herbert A., Jr. and Lehr, Robert R.: Drag and Propulsive Characteristics of Air-Cooled Engine-Nacelle Installations for Two-Engine Airplanes. ACR (WR L-428), Dec. 1940.
- Jones, Robert T.: Notes on the Stability and Control of Tailless Airplanes. TN 837, Dec. 1941.
- Becker, John V. and Leonard, Lloyd H.: High-Speed Tests of a Model Twin-Engine Low-Wing Transport Airplane. Rept. 750, 1942.
- Becker, John V.: High-Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.
- Ellis, Macon C., Jr.: Some Lift and Drag Measurements of a Representative Bomber Nacelle on a Low-Drag Wing. CB, May 1942.
- Allen, H. Julian and Frick, Charles W. Experimental Investigation of a New Type of Low-Drag Wing-Nacelle Combination. ACR, July 1942.
- Ellis, Macon C., Jr.: Some Lift and Drag Measurements of a Representative Bomber Nacelle on a Low-Drag Wing - II. CB, Sept. 1942.
- Ellis, Macon C., Jr.: Effects of a Typical Nacelle on the Characteristics of a Thick Low-Drag Airfoil Critically Affected by Leading-Edge Roughness. CB 3D27, April 1943.
- Abbott, Frank T., Jr.: Lift and Drag Data for 30 Pusher-Propeller Shaft Housings on an NACA 65,3-018 Airfoil Section. ACR 3K13 (WR L-299), Nov. 1943.

- Draley, Eugene C.: A Comparison at High Speed of the Aerodynamic Merits of Models of Medium Bombers Having Thickened Wing Roots and Having Wings with Nacelles. ACR 3L03 (WR L-390), Dec. 1943.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Allen, H. Julian; Frick, Charles W. and Erickson, Myles D.: An Experimental Investigation of Several Low-Drag Wing Nacelle Combinations with Internal Air Flow. ACR 5A15, March 1945.
- Neely, Robert H.; Fairbanks, Richard W. and Conner, D. William: Effects of Wing and Nacelle Modifications on Drag and Wake Characteristics of a Bomber-Type Airplane Model. ARR L5J05 (WR L-114), Dec. 1945.
- Watkins, Charles E.: The Streamline Pattern in the Vicinity of an Oblique Airfoil. TN 1231, March 1947.
- McLellan, Charles H. and Cangelosi, John I.: Effects of Nacelle Position on Wing-Nacelle Interference. TN 1593, June 1948.
- Hieser, Gerald and Whitcomb, Charles F.: Investigation of the Effects of a Nacelle on the Aerodynamic Characteristics of a Swept Wing and the Effects of Sweep on a Wing Alone. TN 1709, Oct. 1948.
- Buschner, R.: On the Installation of Jet Engine Nacelles on a Wing. Fourth Partial Report: Pressure-Distribution Measurements on a Sweptback Wing with Jet Engine Nacelle. TM 1226, July 1949.

Tail-Wing and Fuselage (1.7.1.1.3.)

- Norton, F. H. and Brown, W. G.: The Pressure Distribution over the Horizontal Tail Surfaces of an Airplane -III. Rept. 148, 1922.
- Crowley, J. W., Jr. and Green, M. W.: An Investigation of the Aerodynamic Characteristics of an Airplane Equipped with Several Different Sets of Wings. Rept. 304, 1929.
- Thompson, F. L. and Keister, P. H.: Lift and Drag Characteristics of a Cabin Monoplane Determined in Flight. TN 362, Jan. 1931.
- Higgins, George J.: A Study of the Pitching Moments and the Stability Characteristics of Monoplanes. TN 511, Nov. 1934.

- Tail-Wing and Fuselage Airplanes (Cont.)
- Hartman, Edwin P.: Wind-Tunnel Tests of a 2-Engine Airplane Model as a Preliminary Study of Flight Conditions Arising on the Failure of One Engine. TN 646, April 1938.
- Sherman, Albert: Interference of Tail Surfaces and Wing and Fuselage from Tests of 17 Combinations in the NACA Variable-Density Tunnel. Rept. 678, 1939.
- Bamber, M. J. and House, R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. II - Rectangular NACA 23012 Wing with a Circular Fuselage and a Fin. TN 730, Sept. 1939.
- Greenberg, Harry: Comparison of Vee-Type and Conventional Tail Surfaces in Combination with Fuselage and Wing in the Variable-Density Tunnel. TN 815, July 1941.
- Recant, Isidore G. and Wallace, Arthur R.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics III Symmetrically Tapered Wing at Various Positions on Circular Fuselage with and Without a Vertical Tail. TN 825, Sept. 1941.
- Becker, John V. and Leonard, Lloyd H.: High-Speed Tests of a Model Twin-Engine Low-Wing Transport Airplane. Rept. 750, 1942.
- Recant, I. G. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effect of
 Yaw on Lateral-Stability Characteristics. IV Symmetrically Tapered
 Wing with a Circular Fuselage Having
 a Wedge-Shaped Rear and a Vertical
 Tail. ARR (WR L-520), March 1942.
- Wallace, Arthur R. and Turner, Thomas R.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. V Symmetrically Tapered Wing with a Circular Fuselage Having a Horizontal and a Vertical Tail. ARR 3F23 (WR L-459), June 1943.
- Ankenbruck, Herman O.: Maximum Lift Coefficients of Airplanes Based on Sum of Wing and Tail Areas. RB L4C31 (WR L-556), March 1944.
- Lange, Roy H.: A Summary of Drag Results from Recent Langley Full-Scale-Tunnel Tests of Army and Navy Airplanes. ACR L5A30 (WR L-108), Feb. 1945.

- Hollingworth, Thomas A.: Investigation of Effect of Sideslip on Lateral Stability Characteristics. III Rectangular Low Wing on Circular Fuselage with Variations in Vertical-Tail Area and Fuselage Length with and Without Horizontal Tail Surface. ARR L5C13a (WR L-17), April 1945.
- Hunter, P. A. and Vensel, J. R.: A Flight Investigation to Increase the Safety of a Light Airplane. TN 1203, March 1947.
- Tamburello, Vito and Weil, Joseph: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1327, June 1947.
- Purser, Paul E. and Spear, Margaret F.: Wind-Tunnel Investigation of Effects of Unsymmetrical Horizontal-Tail Arrangements on Power-On Static Longitudinal Stability of a Single-Engine Airplane Model. TN 1474, Oct. 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Brewer, Gerald W. and May, Ralph W., J.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Weil, Joseph and Sleeman, William C., Jr.:
 Prediction of the Effects of Propeller
 Operation on the Static Longitudinal
 Stability of Single-Engine Tractor
 Monoplanes with Flaps Retracted.
 TN 1722, Oct. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Klinar, Walter J. and Snyder, Thomas L.: Influence of Tail Length upon the Spin-Recovery Characteristics of a Trainer-Type-Airplane Model. TN 1764, Dec. 1948.

- Tail-Wing and Fuselage Airplanes (Cont.)
- Johnson, Harold S.: Wind-Tunnel Investigation of Effects of Tail Length on the Longitudinal and Lateral Stability Characteristics of a Single-Propeller Airplane Model. TN 1766, Dec. 1948.
- Gale, Lawrence J. and Jones, Ira P., Jr.:
 Effects of Antispin Fillets and Dorsal
 Fins on the Spin and Recovery Characteristics of Airplanes as Determined
 from Free-Spinning-Tunnel Tests.
 TN 1779, Dec. 1948.

Propeller and Jet Interference (1.7.1.1.4)

- Green, Maurice, W.: Determination of the Lift and Drag Characteristics of an Airplane in Flight. TN 223, Aug. 1925.
- Weick, Fred E.: Full Scale Tests of Wood Propellers on a VE-7 Airplane in the Propeller Research Tunnel. Rept. 301, 1929.
- Weick, Fred E.: The Effect of Reduction Gearing on Propeller-Body Interference as Shown by Full-Scale Wind-Tunnel Tests. Rept. 338, 1929.
- Thompson, F. L. and Keister, P. H.: Lift and Drag Characteristics of a Cabin Monoplane Determined in Flight. TN 362, Jan. 1931.
- Schrenk, Martin: The Mutual Action of Airplane Body and Power Plant. TM 665, April 1932.
- White, James A. and Hood, Manley J.: Wing-Fuselage Interference Tail Buffeting, and Air Flow About the Tail of a Low-Wing Monoplane. Rept. 482, 1934.
- Wilson, Herbert A., Jr. and Lehr, Robert, R.: Drag and Propulsive Characteristics of Air-Cooled Engine-Nacelle Installations for Two-Engine Airplanes. ACR (WR L-428), Dec. 1940.
- Goett, Harry J. and Pass, R. R.: Effect of Propeller Operation on the Pitching Moments of Single-Engine Monoplanes. ACR, May 1941.
- Campbell, John P. and Hollingworth, Thomas A.: The Effect on Stability and Control of a Pusher Propeller Behind Conventional Tail Surfaces as Determined by Tests of a Powered Model in the Free-Flight Tunnel. ACR (WR L-220), Jan. 1943.

- Pitkin, Marvin: Free-Flight-Tunnel Investigation of the Effect of Mode of Propeller Rotation upon the Lateral-Stability Characteristics of a Twin-Engine Airplane Model with Single Vertical Tails of Different Size. ARR 3J18 (WR L-354), Oct. 1943.
- Recant, I. G. and Wallace, A. R.: Effect of Single- and Dual-Rotating Propellers on Longitudinal Stability Characteristics of a 1/9-Scale Model of XP-62 Airplane with Flaps Retracted. ACR 3J29, Oct. 1943.
- Goett, Harry J. and Delany, Noel K.: Effect of Tilt of the Propeller Axis on the Longitudinal-Stability Characteristics of Single-Engine Airplanes. Rept. 774, 1944.
- Neely, R. H.; Fogarty, L. E. and Alexander, S. R.: Comparison of Yaw Characteristics of a Single-Engine Airplane Model with Single-Rotating and Dual-Rotating Propellers. ACR L4D19 (WR L-83), April 1944.
- Stevens, Victor I.; Douglass, William M. and Dods, Jules B., Jr.: Wind-Tunnel Investigation of a 1/20-Scale Powered Model of the Douglas C-74 Airplane. MR (WR A-94), May 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a, Oct. 1944.
- Pitkin, Marvin; Draper, John W. and Bennett, Charles V.: The Influence of Vertical-Tail Design and Direction of Propeller Rotation on Trim Characteristics of a Twin-Engine-Airplane Model with One Engine Inoperative. ARR L5A13 (WR L-191), Feb. 1945.
- Falk, H.: The Influence of the Jet of a Propulsion Unit on Nearby Wings. TM 1104, Sept. 1946.
- Purser, Paul E. and Spear, Margaret F.:
 Tests to Determine Effects of Slipstream Rotation on the Lateral Stability Characteristics of a Single-Engine Low-Wing Airplane Model.
 TN 1146, Sept. 1946.
- Ribner, Herbert S. and MacLachlan, Robert: Effect of Slipstream Rotation in Producing Asymmetric Forces on a Fuselage. TN 1210, March 1947.
- Lange, Roy H.: Langley Full-Scale-Tunnel Investigation of the Factors Affecting the Static Lateral-Stability Characteristics of a Typical Fighter-Type Airplane. RM L6L18, April 1947.

- Propeller and Jet Interference -Airplanes (Cont.)
- Tamburello, Vito and Weil, Joseph: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1327, June 1947.
- Purser, Paul E. and Spear, Margaret F.:
 Wind-Tunnel Investigation of Effects of
 Unsymmetrical Horizontal-Tail Arrangements on Power-On Static
 Longitudinal Stability of a Single-Engine Airplane Model. TN 1474, Oct.
 1947.

External Stores (1.7.1.1.5)

- Jacobs, Eastman N.: Effect of Protruding Gasoline Tanks upon the Characteristics of an Airfoil. TN 249, Oct. 1926.
- Johnson, Joseph L. and Sternfield, Leonard: A Theoretical Investigation of the Effect of Yawing Moment Due to Rolling on Lateral Oscillatory Stability. TN 1723, Oct. 1948.
 - SPECIFIC AIRPLANES AMERICAN (1.7.1.2)

Bell

- Ames, Milton B., Jr. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of a Section of the Horizontal Tail Surface for the Bell XP-63 Airplane. MR (WR L-573), Aug. 1941.
- Nissen, James M. and Gadeberg, Burnett
 L.: Effect of Mach and Reynolds
 Number on the Power-Off Maximum
 Lift Coefficient Obtainable on a P-39N-1
 Airplane as Determined in Flight.
 ACR 4F28, June 1944.
- Clousing, Lawrence A.; Turner, William N. and Rolls, L. Stewart: Measurements in Flight of the Pressure Distribution on the Right Wing of a P 39N-1 Airplane at Several Values of Mach Number. ARR 4K09 (WR A-13), April 1945.
- Gasich, Welko and Clousing, Lawrence A.: Flight Investigation of the Variation of Drag Coefficient with Mach Number for the Bell P-39N-1 Airplane. ACR 5D04, May 1945.
- Preston, G. Merritt; Black, Fred O. Jr. and Jagger, James M.: Altitude Wind Tunnel Tests of the Bell YP-59A Power Plant Installation. MR E5L17 (WR E-274), Feb. 1946.

- Spreiter, John R. and Galster, George M.:
 Observations of Aileron Flutter on the
 Bell P-63A-6 Airplane in Flight at
 High Mach Numbers. ACR 6B08,
 April 1946.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a 35° Sweptback Wing with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1511, Jan. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Longitudinal Stability, Stalling, and Lift Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1679, Aug. 1948.

Boeing

- The Boeing Mail Airplane. AC 52, Aug. 1927.
- Loeser, Oscar E., Jr.: Pressure Distribution Tests on PW-9 Wing Models from -18 Through 90 Degrees Angle of Attack. Rept. 296, 1929.
- Rhode, Richard V.: Pressure Distribution on the Tail Surfaces of a PW-9 Pursuit Airplane in Flight. TN 337, April 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: Pressure Distribution over the Fuselage of a PW-9 Pursuit Airplane in Flight. Rept. 380, 1931.
- Scudder, N. F. and Seidman, Oscar: A
 Flight Investigation of the Spinning of
 the F4B-2 Biplane with Various Loads
 and Tail Surfaces. Rept. 529, 1935.
- Bamber, M. J. and Zimmerman, C. H.: The Aerodynamic Forces and Moments on a Spinning Model of the F4B-2 Airplane as Measured by the Spinning Balance. TN 517, Feb. 1935.
- Barnes, Robert H.: High-Speed Aerodynamic Characteristics of the XB-29 Airplane as Determined from Tests of a 0.075-Scale Model. MR (WR A-82), Jan. 1944.
- Monroe, Louis L. and Saari, Martin J.:
 An Investigation of Cowl Inlets for the
 Boeing B-29 Power Plant Installation.
 MR E5K30 (WR E-205), Jan. 1946.
- Peiser, A. M. and Walker, W. G.: An Analysis of the Airspeeds and Normal Accelerations of Boeing S-307 Airplanes in Commercial Transport Operation. TN 1141, Sept. 1946.

Brewster

- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.: Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3130, Sept. 1943.
- Wetmore, Joseph W. and Sawyer, Richard H.: Flight Tests of F2A-2 Airplane with Full-Span Slotted Flaps and Trailing-Edge and Slot-Lip Ailerons. ARR 3L07 (WR L-272), Dec. 1943.
- Phillips, William H.: Effect of Spring and Gravity Moments in the Control System on the Longitudinal Stability of the Brewster XSBA-1 Airplane. ARR (WR L-263), April 1942.
- Phillips, W. H. and Nissen, J. M.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. I Measurements of the Flying Qualities
 with Original Tail Surfaces. ARR 3F07
 (WR L-412), June 1943.
- Phillips, W. H. and Crane, H. L.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. II Measurements of Flying Qualities with
 Tail Configuration Number Two.
 MR (WR L-598), Dec. 1943.
- Crane, H. L. and Reeder, J. P.: Flight Tests of Various Tail Modifications on the Brewster XSBA-1 Airplane. III -Measurements of Flying Qualities with Tail Configuration 3. MR (WR L-599), July 1944.

Chance-Vought (and Sikorsky)

- Norton, F. H. and Brown, W. G.: Complete Study of the Longitudinal Oscillation of a VE-7 Airplane. Rept. 162, 1923.
- Lesley, E. P.: Report on Tests of Metal Model Propellers in Combination with a Model VE-7 Airplane. TN 245, Aug. 1926.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Lesley, E. P. and Reid, Elliott G.: Tests of Five Metal Model Propellers with Various Pitch Distributions in a Free Wind Stream and in Combination with a Model VE-7 Fuselage. Rept. 326, 1928.
- Rhode, R. V.: Pressure Distribution on Wing Ribs of the VE-7 and TS Airplanes in Flight, Part II: Pull-ups. TN 277, Jan. 1928.

- The Sikorsky Twin-Engined Amphibian Type S-38 Model 1928. AC 79, Aug. 1928.
- Weick, Fred E.: Full Scale Tests of Wood Propellers on a VE-7 Airplane in the Propeller Research Tunnel. Rept. 301, 1929.
- Thompson, F. L. and Kirschbaum, H. W.:
 Maneuverability Investigation of an
 O3U-1 Observation Airplane. Rept.
 457, 1933.
- Liddell, Robert B.: The Aerodynamic Tests of Three Edo Floats for the SB2U-3, OS2U-2 and XSB2C-2 Seaplanes, NACA Models 106-K, 107-K and 125-AH. MR (WR L-722), March 1942.
- Clousing, Lawrence A. and McAvoy,
 William H.: Flight Measurements of
 the Lateral Control Characteristics of
 a Vought-Sikorsky OS2U-2 Airplane
 (Navy No. 2189). MR (WR A-68), Sept.
 1942.
- Graham, Robert R. and Ashworth, C. Dixon: Tests in the 19-Foot Pressure Tunnel of a 1/2.75-Scale Model of the F4U-1 Airplane with Several Balanced Elevators Full-Span Flaps, and Dropable Gas Tank. ACR, Oct. 1942.
- Spahr, J. Richard and Christophersen, Don R.: Measurements in Flight of the Lateral Control Characteristics of a Navy OS2U-2 Airplane (No. 3075) Equipped with Full-Span Zap Flaps and Simple Circular Arc Ailerons. MR (WR A-32), Sept. 1944.

Consolidated-Vultee

- Scudder, Nathan F.: A Flight Investigation of the Spinning of the NY-1 Airplane with Varied Mass Distribution and Other Modifications, and an Analysis Based on Wind Tunnel Tests. Rept. 441, 1932.
- Bamber, M. J. and Zimmerman, C. H.: The Aerodynamic Forces and Moments Exerted on a Spinning Model of the NY-1 Airplane as Measured by the Spinning Balance. Rept. 456, 1933.
- Scudder, N. F.: A Flight Investigation of the Effect of Mass Distribution and Control Setting on the Spinning of the XN2Y-1 Airplane. Rept. 484, 1934.
- Scudder, N. F.: The Forces and Moments Acting on Parts of the XN2Y-1 Airplane During Spins. Rept. 559, 1936.

- Specific Types American Airplanes (Cont.)
- Bamber, M. J. and House, R. O.: Spinning Characteristics of the XN2Y-1 Airplane Obtained from the Spinning Balance and Compared with Results from the Spinning Tunnel and from Flight Tests. Rept. 607, 1937.

Curtiss-Wright

- Bacon, D. L.: Preliminary Experiments to Determine Scale and Slip Stream Effects on a 1/24th Size Model of the JN4H Biplane. Rept. 122, 1921.
- Norton, F. H.: The Measurement of the Damping in Roll on a JN4H in Flight. Rept. 167, 1923.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 Vought and of a TS Curtiss Airplane in Flight. Rept. 257, 1927.
- Rhode, R. V.: Pressure Distribution on Wing Ribs of the VE-7 and TS Airplanes in Flight. Part II: Pull-Ups. TN 277, Jan. 1928.
- Dearborn, C. H. and Kirschbaum, H. W.: Maneuverability Investigation of the F6C-3 Airplane with Special Flight Instruments. Rept. 369, 1930.
- Gough, Melvin N.: Effect of the Angular Position of the Section of a Ring Cowling on the High Speed of an XF7C-1 Airplane. TN 355, Nov. 1930.
- Stickle, George W.: Flight Tests of NACA Nose-Slot Cowlings on the BFC-1 Airplane. TN 720, Aug. 1939.
- Liddell, Robert B.: The Aerodynamic Tests of Three Edo Floats for the SB2U-3, OS2U-2 and XSB2C-2 Seaplanes, NACA Models 106-K, 107-K, and 125-AH. MR (WR L-722), March 1942.
- Bailey, F. J., Jr.; Johnston, J. Ford and Voglewede, T. J.: Flight Investigation of the Performance and Cooling Characteristics of a Long-Nose High-Inlet-Velocity Cowling on the XP-42 Airplane. ARR (WR L-356), April 1942.
- Gilruth, R. R.: Flight Tests of Internally Balanced, Sealed Ailerons on the Curtiss XP-60 Airplane. CB, July 1942.
- Phillips, William H.: Comparison of Aileron Control Characteristics as Determined in Flight Tests of P-36, P-40, Spitfire and Hurricane Pursuit Airplanes. CB, Aug. 1942.

- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Development of Ailerons for the Curtiss XP-60 Airplane. ACR, Sept. 1942.
- Johnson, Harold I. and Vensel, Joseph R.: Flight Measurements of the Rudder Control and Sideslip Characteristics of Four Vertical Tail Arrangements on the P-40 Series Airplanes. MR (WR L-547), Oct. 1942.
- Johnston, J. Ford: Review of Flight Tests of NACA C and D Cowlings on the XP-42 Airplane. Rept. 771, 1943.
- Bailey, F. J., Jr. and Johnston, J. Ford: Flight Investigation of NACA DS Cowlings on the XP-42 Airplane. I - High-Inlet-Velocity Cowling with Propeller Cuffs Tested in High Speed Level Flight. ARR (WR L-383), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. II Low-Inlet-Velocity Cowling with Axial-Flow Fan and Propeller Cuffs. ARR (WR L-243), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. III Low-Inlet-Velocity Cowling Without Fan or Propeller Cuffs, with Axial Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR (WR L-508), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS Cowlings on the XP-42 Airplane. IV High-Inlet-Velocity Cowling Tested in Climb with and Without Propeller Cuffs and in High Speed Level Flight Without Propeller Cuffs. ARR (WR L-285), Jan. 1943.
- Dingeldein, Richard C.: Full-Scale Tunnel Measurements of the Pressures on the Elevator and Fuselage of the Curtiss XP-55 Airplane. MR (WR L-630), June 1943.
- Nichols, Mark R.: An Experimental Investigation of the Intercooler and Charge-Air Duct Systems of the P-60A Airplane. ACR 3J14, Oct. 1943.
- Recant, I. G. and Wallace, A. R.: Effect of Single- and Dual-Rotating Propellers on Longitudinal Stability Characteristics of a 1/9-Scale Model of XP-62 Airplane with Flaps Retracted. ACR 3J29, Oct. 1943.
- Phillips, W. H.; Williams, W. C. and Hoover, H. H.: Measurements of Flying Qualities of a Curtiss SB2C-1 Airplane (No. 00014). MR (WR L-571), March 1944.

- Specific Types American Airplanes (Cont.)
- Lowry, John G.; Turner, Thomas R. and Liddell, Robert B.: Aerodynamic Characteristics of Several Modifications of a 0.45-Scale Model of the Vertical Tail of the Curtiss XP-62 Airplane. MR L6F27 (WR L-736), July 1946.
- Kleckner, Harold F.: Flight Tests of an All-Movable Horizontal Tail with Geared Unbalancing Tabs on the Curtiss XP-42 Airplane. TN 1139, Oct. 1946.

Douglas

- Pearson, H. A.: Pressure-Distribution Measurements on an O-2H Airplane in Flight. Rept. 590, 1937.
- Root, L. E.: The Development of Satisfactory Flying Qualities on the Douglas Dive Bomber, Model SBD-1 Through Flight Testing Successive Modifications in Control-Surface Area, Hinge-Line Location, and Aerodynamic-Balance Nose Shape. ACR (WR W-81), May 1942.
- Johnson, Harold I.: Determination of Flight Paths of an SBD-1 Airplane in Simulated Diving Attacks. ACR, March 1943.
- Ashworth, C. Dixon: Pressure-Distribution Measurements on Various Surfaces of a 0.2375-Scale Model of the Douglas XA-26 Airplane in the 19-Foot Pressure Tunnel. MR (WR L-553), Oct. 1943.
- Teplitz, Jerome: Effects of Sweep and Dihedral on Stalling and Lateral Characteristics of the Wing-Fuselage Combination of a Model of the XA-26 Airplane with Partial- and Full-Span Flaps. Rept. 800, 1944.
- Stevens, Victor I.; Douglass, William M. and Dods, Jules B., Jr.: Wind Tunnel Investigation of a 1/20-Scale Powered Model of the Douglas C-74 Airplane. MR (WR A-94), May 1944.
- Nichols, Mark R.; Keith, Arvid L., Jr. and Boswinkle, Robert W., Jr.: A Wind Tunnel Investigation of Carburetor Air Scoops Designed for the Douglas XTB2D-1 Airplane. MR (WR L-751), June 1944.
- Hall, Charles F. and Mannes, Robert L.: Longitudinal Characteristics and Aileron Effectiveness of the XB-42 Airplane from High-Speed Wind-Tunnel Tests. CMR (WR A-84), Sept. 1944.

- Ashworth, C. Dixon; Spooner, Stanley H. and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. I-Full Span Flap and Air-Brake Investigation. MR (WR L-563), Sept. 1944.
- Spooner, Stanley H.; Ashworth, C. Dixon and Russell, Robert T.: Tests of a 0.30 Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. II Roll-Flap Positioning and Lateral Control Investigation. MR (WR L-564), Sept. 1944.
- Bartlett, Walter A., Jr. and Marino, Alfred A.: An Investigation of the Mutual Interference Effects of a Tail-Surface and Stern-Propeller Installation on a Model Simulating the Douglas XB-42 Empennage. MR L4K09 (WR L-625), Nov. 1944.
- Sjoberg, S. A.; Crane, H. L. and Hoover, H. H.: Measurement of Flying Qualities of a Douglas A-26B Airplane (AAF No. 41-39120). III - Stalling Characteristics. MR L5A04a (WR L-607), Jan. 1945.
- Nuber, Robert J. and Rice, Fred J., Jr.:
 Lift Tests of a 0.1536c Thick Douglas
 Airfoil Section of NACA 7-Series Type
 Equipped with a Lateral-Control Device
 for Use with a Full-Span Double-Slotted
 Flap on the C-74 Airplane. MR
 L5C24a (WR L-641), March 1945.
- Crane, Harold L. and Sjoberg, Sigurd A.:
 Comparison of Predicted and Actual
 Control-Fixed Stability and Control
 Characteristics of a Douglas A-26B
 Airplane. MR L5D06 (WR L-608),
 April 1945.
- Schueler, Carl F. and Korycinski, Peter F.: Effect of Fabric Deflections at High Speeds on the Aerodynamic Characteristics of the Horizontal Tail Surface of an SB2D-1 Airplane. ARR L5F01a (WR L-170), June 1945.
- Kayten, Gerald G. and Koven, William:
 Comparison of Wind-Tunnel and Flight
 Measurements of Stability and Control
 Characteristics of a Douglas A-26 Airplane. ARR L5H11a (WR L-99),
 March 1946.
- Kuenzig, John K. and Palter, Herman: Aerodynamics of the Carburetor Air Scoop and the Engine Cowling of the XTB2D-1 Airplane. MR E6E27 (WR E-280), June 1946.

Specific Types - American Airplanes (Cont.)

- Peiser, A. M.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-3 Airplanes in Commercial Transport Operation. TN 1142, Sept. 1946.
- Talmage, Donald B. and Reeder, John P.: The Effects of Friction in the Control System on the Handling Qualities of a C-54D Airplane. RM L8G30a, Nov. 1948.
- Talmage, Donald B. and Reeder, John P.: Lateral and Directional Stability and Control Characteristics of a C-54D Airplane. RM L8K30, March 1949.

Fairchild

- The Fairchild "All-Purpose" Cabin Monoplane. AC 58, Oct. 1927.
- Herrnstein, William H., Jr.: Full Scale Drag Tests on Various Parts of the Fairchild (FC-2W2) Cabin Monoplane. TN 340, May 1930.
- Dearborn, C. H. and Soulé, H. A.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with a Fowler Flap. TN 578, Aug. 1936.
- Dearborn, C. H. and Soulé, H. A.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with a Zap Flap and Zap Ailerons. TN 596, March 1937.
- Reed, Warren D. and Clay, William C.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with External-Airfoil Flaps. TN 604, July 1937.
- Clousing, L. A.; Lehr, Robert R. and O'Sullivan, William J.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild XR2K-1 Airplane with a Zap Flap and Upper-Surface Aileron-Wing Installation. ARR (WR L-437), March 1942.
- Kleckner, Harold F.: Flight Tests of an All-Movable Vertical Tail on the Fairchild XR2K-1 Airplane. ACR 3F26 (WR L-397), June 1943.

Fleetwings

Ellerbrock, Herman H., Jr. and Wilson, Herbert A., Jr.: Cowling and Cooling Tests of a Fleetwings Model 33 Airplane in Flight. MR (WR L-632), May 1944.

Gliders

Stone, Ralph W., Jr. and Daughtridge, Lee T, Jr.: Free-Spinning, Longitudinal Trim and Tumbling Tests of 1/17.8-Scale Models of the Cornelius XFG-1 Glider. MR L5K21 (WR L-738), Jan. 1946.

Grumman

- Kleckner, Harold F.: Flight Measurements of the Aileron Characteristics of a Grumman F4F-3 Airplane. ACR, Sept. 1942.
- McKee, John W. and Liddell, Robert B.:
 Wind-Tunnel Investigation of a Revised
 Horizontal Tail Surface for the Grumman TBF-1 Airplane. MR (WR L-702),
 Feb. 1943.
- Lowry, John G.; Maloney, James A. and Garner, I. Elizabeth: Wind Tunnel Investigation of Shielded Horn Balances and Tabs on a 0.7-Scale Model of the XF6F Vertical Tail Surface. ACR 4C11 (WR L-516), March 1944.
- Becker, John V. and Korycinski, Peter F.: Aerodynamic Tests of a Full-Scale TBF-1 Aileron Installation in the Langley 16-Foot High-Speed Tunnel. ARR L4K22 (WR L-31), Dec. 1944.
- Williams, Walter C.: Flight Tests of the Lateral Control Characteristics of an F6F-3 Airplane Equipped with Spring-Tab Ailerons. ARR L5C23 (WR L-149), April 1945.
- Turner, Howard L.: Buffeting of External Fuel Tanks at High-Speeds on a Grumman F7F-3 Airplane. RM A7AO7, Jan. 1947.
- Cocke, Bennie W., Jr. and Czarnecki, K. R.: Canopy Loads Investigation for the F6F-3 Airplane. RM L6L23a, April 1947.
- Matheny, Cloyce E. and Huston, Wilber B.: Flight Investigation of Loads on a Bubble-Type Canopy. RM L8C30, Oct. 1948.

Hughes

- Fullmer, Felicien F., Jr.: Tests of a 1/40 Scale Wing-Hull Model and a 1/10-Scale Float-Strut Model of the Hughes-Kaiser Cargo Airplane in the Two-Dimensional Low-Turbulence Pressure Tunnel. MR (WR L-633), Sept. 1943.
- Olson, Roland E.; Posner, Jack and Woodward, David R.: Resistance Tests of a 1/16-Size Model of the Hughes-Kaiser Flying Boat, NACA Model 183. MR (WR L-683), June 1944.

- Specific Types American Airplanes (Cont.)
- Underwood, William J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of Spoiler Aileron Flap Model for the Hughes XF-11 Airplane. MR L5C29 (WR L-644), April 1945.

Lockheed

- Lockheed "Vega" Airplane. A Commercial Cabin Monoplane. AC 61, Nov. 1927.
- Erickson, Albert L.: Investigation of Diving Moments of the Lockheed P-38 Airplane in the 16-Foot Wind Tunnel at Ames Aeronautical Laboratory. MR (WR A-65), Oct. 1942.
- Stevens, Victor I., Jr. and McCullough, George B.: Flying Qualities of the PV-1 as Estimated from Wind-Tunnel Tests. MR (WR A-93), Sept. 1943.
- Fullmer, Felicien F., Jr.: Two-Dimensional Wind Tunnel Investigation of Six Airfoil Sections for the Wing of the Vega XP2V-1 Airplane TED No. NACA 231. MR L5I21 (WR L-681), Oct. 1945.
- Brown, Harvey H. and Clousing, Lawrence A.: Wing Pressure Distribution Measurements up to 0.866 Mach Number in Flight on a Jet-Propelled Airplane. TN 1181, March 1947.
- Steiner, Roy: An Analysis of Airspeeds and Mach Numbers Attained by Lockheed Constellation Airplanes in Transcontinental Operations During the Early Summer of 1946. RM L7CO6, Oct. 1947.
- Steiner, Roy: Supplementary Data on Airspeeds and Mach Numbers Attained by Lockheed Constellation Airplanes in Transcontinental Operations. RM L7F25, Oct. 1947.

Martin

- DeFrance, Smith J.: Results of Drag Tests on P3M-1 Nacelle. ACR, April 1932.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Donely, Philip and Shufflebarger, C. C.: Tests in the Gust Tunnel of a Model of the XBM-1 Airplane. TN 731, Oct. 1939.
- Pearson, Henry A. and Smull, Leland K.: Control Motion Studies of the PBM-3 Flying Boat in Abrupt Pull-Ups. MR (WR L-577), Nov. 1942.

- Nelson, William J. and Ebert, John W., Jr.: An Investigation of the Airflow Around a Martin PBM-3 Flying Boat by Means of Tufts. MR (WR L-674), April 1943.
- Gustafson, F. B. and O'Sullivan, William J., Jr.: The Effect of High Wing Loading on Landing Technique and Distance, with Experimental Data for the B-26 Airplane. ARR L4K07 (WR L-160), Jan. 1945.
- Pierson, J. D.: JRM-1 Landing Impact Characteristics from Model Tests. ARR 5L03 (WR W-106), Feb. 1946.
- Lewis, James P.: Wind Tunnel Investigation of Icing of a PBM-3D Cooling Fan Installation. RM E6L03, Dec. 1946.

Navy

- The Aeronautics Staff, Construction Department, Navy Yard, Washington, D. C.: Air Force and Three Moments for F-5-L Seaplane. TN 85, Feb. 1922.
- Diehl, Lieut. W. S., Bureau of Aeronautics, USN: F-5-L Boat Seaplane Performance Characteristics. TN 118, Oct. 1922.
- Smith, R. H.: Air Force and Moment for N-20 Wing with Certain Cut-Outs. Rept. 266, 1927.

North American

- Delany, Noel K.: Effects of Direction of Propeller Rotation on the Longitudinal Stability of the 1/10-Scale Model of the North American XB-28 Airplane with Flaps Neutral. ACR, June 1942.
- Holtzclaw, Ralph W. and Erickson, Myles D.: Wind-Tunnel Investigation of Flap, Aileron and Exterior Bomb Installations on a 24-Inch Constant-Chord North American XB-28 Wing Model. ARR, July 1942.
- Zalovcik, John A.: A Profile-Drag Investigation in Flight on an Experimental Fighter-Type Airplane - the North American XP-51 (Air Corps Serial No. 41-38). ACR, Nov. 1942.
- Abbott, Frank T., Jr. and Underwood, William J.: Wind-Tunnel Investigation of Profile Drag and Lift of an Intermediate Wing Section of the XP-51 Airplane with Beveled Trailing-Edge and Contour. MR (WR L-615), Jan. 1943.
- Laitone, Edmund V.: Investigation of the Longitudinal Stability at High Speeds of a Northrop XP-56 1/5-Scale Model. MR (WR A-77), March 1943.

- Specific Types American Airplanes (Cont.)
- Matthews, Howard F.: Elimination of Rumble from the Cooling Ducts of a Single-Engine Pursuit Airplane. RMR (WR A-70), Aug. 1943.
- Nissen, James M.; Gadeberg, Burnett L. and Hamilton, William T.: Correlation of the Drag Characteristics of a P-51B Airplane Obtained from High-Speed Wind Tunnel and Flight Tests. ACR 4K02, Feb. 1945.
- Beeler, De D. and Williams, Walter C.: Flight Tests of Dive-Recovery Flaps on an XP-51 Airplane. ACR L5D20a, May 1945.
- Beeler, De E.: Air-Flow Behavior over the Wing of an XP-51 Airplane as Indicated by Wing-Surface Tufts at Subcritical and Supercritical Speeds. RM L6L03, April 1947.

Pitcairn

The Pitcairn "Mailwing" PA-5. A Single-Seat Commercial Biplane. AC 62, Nov. 1927.

Republic

- Theodorsen, Theodore and Regier, Arthur A.: Vibration Surveys of the P-47-B Rudder and Fin-Rudder Assembly. MR (WR L-653), April 1943.
- Dingledein, Richard C.: Full-Scale Tunnel Investigation of the Pressure Distribution over the Tail of the P-47B Airplane. ARR 3E25 (WR L-439), May 1943.
- Gilruth, R. R. and Liddell, C. J.: Effect of Altitude on Elevator Control Characteristics in Turning Flight as Measured for P-47B and P-47C Airplanes. ACR 3L17, Dec. 1943.
- Vogeley, A. W.: Climb and High-Speed Tests of a Curtiss No. 714-1C2-12 Four-Blade Propeller on the Republic P-47C Airplane. ACR L4L07 (WR L-177), Dec. 1944.
- Hamilton, William T. and Boddy, Lee E.: High-Speed Wind-Tunnel Tests of Dive-Recovery Flaps on a 0.3-Scale Model of the P-47D Airplane. ACR 5D19, May 1945.
- Hamilton, William T. and Boddy, Lee E.: High Speed Wind Tunnel Tests of a 0.3-Scale Model of the P-47D Airplane. ACR 5D20, May 1945.

- Gardner, John J.: Effect of Blade Loading on the Climb and High-Speed Performance of a Three-Blade Hamilton Standard No. 6507A-2 Propeller on a Republic P-47D Airplane. MR L5G09a (WR L-594), July 1945.
- Zalovcik, John A.: Flight Investigation of Boundary Layer and Profile Drag Characteristics of Smooth Wing Sections of a P-47D Airplane. ACR L5H11a (WR L-86), Oct. 1945.
- Cahill, Jones F.: Aerodynamic Data for a Wing Section of the Republic XF-12 Airplane Equipped with a Double Slotted Flap. MR L6A08a (WR L-544), Jan. 1946.
- Zalovcik, John A. and Daum, Fred L.:
 Flight Investigation at High Speeds of
 Profile Drag of Wing of a P-47D Airplane Having Production Surfaces
 Covered with Camouflage Paint. ACR
 L6B21 (WR L-98), March 1946.

Ryan

Hall, Donald A.: Technical Preparation of the Airplane "Spirit of St. Louis." TN 257, July 1927.

S

- Munk, Max M. and Diehl, Walter S.: The Air Forces on a Model of the Sperry Messenger Airplane Without Propeller. Rept. 225, 1925.
- Shoemaker, James M.: Air Force Tests of Sperry Messenger Model with Six Sets of Wings. Rept. 269, 1927.
- Stinson Commercial Airplane Type S M-1. A Semicantilever Monoplane. AC 60, Oct. 1927.
- Weick, Fred E.: Full Scale Drag Tests on Various Parts of Sperry Messenger Airplane. TN 271, Jan. 1928.
- Weick, Fred E.: The Effect of the Sperry Messenger Fuselage on the Air Flow at the Propeller Plane. TN 274, Jan. 1928.

T

- Norton, F. H.: Pressure Distribution over the Wings of an MB-3 Airplane in Flight. Rept. 193, 1924.
- "Travel Air" Commercial Airplane Type 5000. AC 55, Sept. 1927.

BRITISH (1.7.1.2)

Flight Test of the Handley Page Torpedo-Carrying Airplane - Editorial from "The Aeroplane," March 8, 1922. TM 82, April 1922.

- Specific Types British Airplanes (Cont.)
- Norton, F. H. and Carroll, T.: The Vertical, Longitudinal, and Lateral Accelerations Experienced by an S.E.5A Airplane While Maneuvering. Rept. 163, 1923.
- Miller, Roy G. and Brown, D. T.: The "Turkey Buzzard" Glider. TM 214, June 1923.
- Light Airplanes Which Participated in Contest at Lympne, England, October, 1923. TM 261, May 1924.
- Buchanan, J. S.: Royal Aero Club Light Aeroplane Competition. TM 297, Jan. 1925.
- The Pander Light Biplane. A School Two-Seater with 45 HP Anzani Engine. AC 2, April 1926.
- The Vickers "Vendace." A Land or Sea Training Biplane. AC 3, May 1926.
- The Short S.7 "Mussel." A Training Seaplane with 65 HP. "Cirrus" Engine. AC 5, May 1926.
- Two "Gloster" Airplanes. "Grouse II," -Two-Seat Training Airplane. The "Grebe II," - Single-Seat Fighter. AC 7, June 1926.
- Serryer, J.: Wibault Two-Seat Monoplane 8C2 - An All-Metal Pursuit and Observation Airplane. AC 9, June 1926.
- A New De Havilland Commercial Airplane-The D.H.66 with Three Bristol "Jupiter" Engines. AC 10, July 1926.
- The Blackburn "Sprat." A Training Airplane Convertible into Landplane or Seaplane. AC 11, July 1926.
- The Armstrong-Whitworth "Argosy." The Latest Three-Engined Commercial Airplane. AC 14, Aug. 1926.
- The Avro "Avian" Airplane. 65 HP. Armstrong-Siddeley "Genet" Engine. AC 17, Oct. 1926.
- The De Havilland "Moth." AC 18, Oct. 1926.
- The Bristol "Badminton" Airplane. AC 19, Oct. 1926.
- The Handley Page "Hamlet." AC 20, Nov. 1926.
- The A.N.E.C. IV "Missel Thrush" Light Airplane. AC 21, Nov. 1926.
- Serryer, J.: Avia Pursuit Airplane B.H.21. AC 22, Nov. 1926.

- The Supermarine "Southampton" Seaplane. (Observation or Bomber). AC 25, Dec. 1926.
- The Boulton and Paul "Bugle" Airplane. (Day Bomber). AC 26, Dec. 1926.
- Training Airplane "Avia B.H. 11." AC 40, May 1927.
- The Blackburn "Bluebird." Two-Seat Training and Sport Airplane. AC 45, June 1927.
- The Gloster "Gambet" Airplane. A Deck-Landing Ship's Fighter Fitted with a 420 HP. Bristol Jupiter VI Engine. AC 48, July 1927.
- The Avro "Gosport," 504 R. A New Training Airplane. AC 49, July 1927.
- The Westland "Widgeon III," "Cirrus II" or "Genet II" Engine from "Flight," July 28, 1927. AC 53, Aug. 1927.
- The De Havilland "Tiger Moth." A Low Wing Monoplane from "Flight," September 22, 1927. AC 57, Oct. 1927.
- Higgins, George J.; Diehl, W. S. and DeFoe, George L.: Tests on Models of Three British Airplanes in the Variable Density Wind Tunnel. Rept. 279, 1928.
- The De Havilland 61 "Canberra" (British). A 6-8 Passenger Airplane. AC 65, Jan. 1928.
- Supermarine S.5 Seaplane (British). Winner of the 1927 Schneider Cup Race. AC 67, March 1928.
- The Short "Calcutta." First British All-Metal Commercial Seaplane. AC 68, March 1928.
- The "Gloster IV" Seaplane (British). AC 69, March 1928.
- The Avro "Avian III" Airplane (British). AC 70, April 1928.
- The Boulton and Paul "Sidestrand I"
 Bomber Airplane (British). AC 71,
 April 1928.
- The Parnall "Imp." A New British Light Airplane. AC 72, May 1928.
- Westland "Wapiti" (British). AC 81, Sept. 1928.
- The Armstrong Whitworth "Starling" (British) (Single-Seat Fighter). AC 82, Sept. 1928.
- The Vickers "Vellore" (British) Freight Carrier. AC 83, Oct. 1928.

- Specific Types British Airplanes (Cont.)
- The Gloster "Goldfinch" (British) Single-Seat Fighter. AC 85, Nov. 1928.
- The Boulton and Paul "Partridge" (British) All-Metal Single-Seat Fighter. AC 90, Feb. 1929.
- The De Havilland D. H. 75 "Hawk Moth" (British) Cabin Monoplane. AC 91, March 1929.
- The Blackburn "Bluebird" Mark IV (British) All-Metal Biplane. AC 94, April 1929.
- The Westland IV Commercial Monoplane (British) Three "Cirrus III" Engines. AC 95, April 1929.
- The Parnall "Pipit" (British) a Single-Seat Ship's Fighter. AC 99, Aug. 1929.
- The A.B.C. "Robin" (British) a Single-Seat Cabin Monoplane. AC 101, Sept. 1929.
- The Fairey III.F (British) a General-Purpose Biplane. AC 102, Sept. 1929.
- The Bristol "Bulldog" (British) a Single-Seat All-Steel Fighter. AC 103, Oct. 1929.
- The Saunders "Cutty Sark" Commercial Seaplane (British) a High-Wing Monoplane Flying Boat. AC 105, Nov. 1929.
- The Comper C(LA)7 "Swift" Airplane (English) a High-Wing Single-Seat Monoplane. AC 108, Feb. 1930.
- The De Havilland "Moth Three" Airplane (British) a High-Wing Commercial Monoplane. AC 117, May 1930.
- The "Avro Trainer" Airplane (British) a Training Biplane. AC 119, June 1930.
- The Cierva "Autogiro" Mark III (British) Armstrong-Siddeley "Genet Major" Engine. AC 120, June 1930.
- The Short "Valetta" Commercial Seaplane (British) a High-Wing All-Metal Twin-Float Monoplane. AC 125, Aug. 1930.
- The Henderson "Hendy" 302 Cabin Airplane (British) a Two-Seat Low-Wing Cantilever Monoplane. AC 126, Sept. 1930.
- Westland "Wessex" Commercial Airplane (British) a High-Wing Semicantilever Monoplane. AC 128, Oct. 1930.
- Vickers "Viastra I" Commercial Airplane (British) a High-Wing All-Metal Semi-Cantilever Monoplane. AC 129, Nov. 1930.

- The Handley Page Type 42 Commercial Airplane (British) a Metal Sesquiplane. AC 131, Dec. 1930.
- The Mono-Spar Light Airplane (British) a Twin-Engined Low-Wing Cabin Monoplane. AC 148, July 1931.
- Description of Westland Hill Pterodactyl Mark IV. MP 27, Aug. 1931.
- The Avro 627 "Mailplane" (English) a Single-Seat Biplane. AC 150, Aug. 1931.
- The Supermarine S.6.B. Racing Seaplane (British) a Low-Wing Twin-Float Monoplane. AC 154, Dec. 1931.
- The Armstrong Whitworth A.W. XVI Military Airplane (British) a Single-Seat Biplane. AC 156, Jan. 1932.
- The Avro 631 Training Airplane (British) a Two-Seat Light Biplane. AC 161, May 1932.
- The D.H. 83 "Fox Moth" Commercial Airplane (British) a Three-Passenger Light Cabin Biplane. AC 162, May 1932.
- The Stieger ST. 4 Light Airplane (British) a Twin-Engine Four-Seat Low-Wing Cabin Monoplane. AC 164, May 1932.
- Armstrong-Whitworth A.W. XV "Atalanta" Airplane (British) a Commercial Multiplace Cantilever Monoplane. AC 167, Aug. 1932.
- Spartan "Cruiser" Commercial Airplane (British) a Six-Seat Low-Wing Cantilever Monoplane. AC 168, Aug. 1932.
- The D.H. "Dragon Moth" Commercial Airplane (British) a Twin-Engine 6-Passenger Biplane. AC 174, Jan. 1933.
- The Boulton and Paul P.64 Mail-Carrier a Two-Engine All-Metal Biplane. AC 177, April 1933.
- The Airspeed "Courier" Commercial Airplane (British) a Low-Wing Cantilever Monoplane. AC 178, May 1933.
- The Westland "Wallace" General-Purpose Airplane (British) an All-Metal Biplane. AC 179, May 1933.
- The Schackleton-Murray SM-1 Light Airplane a Two-Place High-Wing Monoplane. AC 181, June 1933.
- The Comper "Mouse" Commercial Airplane (British) a Three-Seat Cabin Low-Wing Monoplane. AC 184, Oct. 1933.

- Specific Types British Airplanes (Cont.)
- The D.H.85 "Leopard Moth" Airplane (British) a Three-Seat Cabin High-Wing Monoplane. AC 186, Dec. 1933.
- D.H. 86 "Express Air Liner" (British) a Four-Engine Biplane. AC 189, April 1934.
- The Short "Scylla" Commercial Airplane (British) an All-Metal Biplane. AC 190, May 1934.
- Avro 642 Commercial Airplane (British) a High-Wing Cantilever Monoplane. AC 191, May 1934.
- The Avro "Commodore" Touring Airplane (British) a Cabin Biplane. AC 193, July 1934.
- The Comper "Streak" Single-Seat Airplane (British) a Low-Wing Cantilever Monoplane. AC 194, July 1934.
- The British Klemm "Eagle" Commercial Airplane a Low-Wing Cantilever Monoplane. AC 195, Aug. 1934.
- Colson, C. N.: Avro C.30 Direct-Control Autogiro (British). AC 196, Sept. 1934.
- The De Havilland "Comet" Long-Range Airplane (British) a Low-Wing Cantilever Monoplane. AC 197, Oct. 1934.
- Kay 331 Gyroplane (British) All-Metal Single-Seat Light Rotor Plane. AC 198, Jan. 1935.
- Boulton Paul P.71A Commercial Airplane (British) a Two-Engine Biplane. AC 199, March 1935.
- The Short "Scion Senior" Commercial Airplane (British) a Four-Engine High-Wing Cantilever Monoplane. AC 200, Feb. 1936.
- The Avro "Anson" General-Purpose Airplane (British) a Two-Engine Low-Wing Cantilever Monoplane. AC 201, March 1936.
- The Vickers-Supermarine "Scapa" (British) a Military Flying Boat. AC 203, May 1936.
- The Short "Empire" Commercial Flying Boat (British) an All-Metal Cantilever Monoplane. AC 204, Dec. 1936.
- The Hafner A.R.III Gyroplane (British). AC 205, April 1937.
- Armstrong Whitworth 27 "Ensign" Commercial Airplane (British) an All-Metal High-Wing Monoplane. AC 206, May 1937.

- Baynes Bee Light Airplane (British) a Two-Seat High-Wing Monoplane. AC 207, June 1937.
- The Airspeed "Oxford" Training Airplane (British) a Two-Engine Cantilever Monoplane. AC 208, Sept. 1937.
- Fairey "Battle" Medium Bomber Airplane (British) an All-Metal Low-Wing Cantilever Monoplane. AC 209, Nov. 1937.
- Nissen, J. M. and Phillips, W. H.: Measurements of the Flying Qualities of a Hawker Hurricane Airplane. MR (WR L-565), April 1942.
- Vensel, J. R. and Phillips, W. H.: Stalling Characteristics of the Supermarine Spitfire VA Airplane. ACR (WR L-353), Sept. 1942.
- Crane, H. L.; Talmage, D. B. and Gray, W. E., Jr.: Measurement of Flying Qualities of a De Havilland Mosquito F-8 Airplane (AAF No. 43-334960). I Lateral and Directional Stability and Control Characteristics. MR L5D19 (WR L-593), May 1945.

FRENCH (1.7.1.2)

- Margoulis, W.: Notes on Specifications for French Airplane Competitions. TN 20, Oct. 1920.
- The Potez Heavy Service Landing Gear -Hutchinson System. MP 11, Sept. 1922.
- Lesage, M. Andre: Magnan Glider M-2. TM 250, Feb. 1924.
- List of Commercial Aircraft Belonging to the Various French Air Navigation Companies as of August 31st, 1922. Translated from "l'Auto" of November 19, 1922. TM 177, Jan. 1923.
- Serryer, J.: Liore-Olivier Airplane. (Type 12 Night-Bomber or Type 20 Commercial). AC 1, March 1926.
- Serryer, J.: Farman Monoplane F.170-Commercial Airplane with One 500 HP. Farman Engine. AC 12, Aug. 1926.
- The Farman Commercial Airplane "Jabiru." AC 15, Sept. 1926.
- Albert TE-1 Training Airplane. AC 23, Dec. 1926.
- Dyle and Bacalan Metal Monoplane, D.B. 10 Night Bomber. AC 27, Jan. 1927.
- Combat and Bombing Airplane, Amiot 120 B 3. AC 28, Jan. 1927.
- Nieuport-Delage Pursuit Airplane 48 C.1. ("Jockey" Type). AC 29, Jan. 1927.

- Specific Types French Airplanes (Cont.)
- Richard-Penhoet Commercial Seaplane. AC 35, March 1927.
- The Francois Villiers Marine Pursuit Airplane. AC 37, April 1927.
- Liore-Olivier LeO 194 Seaplane. AC 39, April 1927.
- North, J. D.: Some Impressions of the Paris Aero Show. TM 407, April 1927.
- "Meteore 63" Commercial Seaplane. AC 41, May 1927.
- The Mureaux "Brunet 3C2" Pursuit Airplane. AC 42, May 1927.
- "Levasseur 8" Transatlantic Airplane. AC 50, Aug. 1927.
- "Avimeta" Three-Engine Commercial Monoplane, Type A.V.M. 132. AC 63, Dec. 1927.
- Bleriot-Spad 91 Airplane (French). Pursuit Single-Seater, Type "Jockey." AC 74, May 1928.
- Morane-Saulnier 121 Single-Seat Pursuit Airplane (French). AC 75, June 1928.
- Rene Couzinet Monoplane (French). AC 77, July 1928.
- C.A.M.S. 54 G.R. Transatlantic Seaplane (French). AC 80, Sept. 1928.
- Bleriot Combat Monoplane 127 (French). AC 86, Nov. 1928.
- "Villiers 24" Slotted-Wing Airplane (French). Night Pursuit Sesquiplane. AC 87, Nov. 1928.
- Farman Two-Engine Commercial Biplane F. 180 (French). AC 88, Jan. 1929.
- Albessard "Triavion" Airplane (French). A Two-Seat Tandem Monoplane. AC 89, Jan. 1929.
- Nieuport-Delage 640 (French). Commercial High-Wing Monoplane. AC 92, March 1929.
- Morane-Saulnier 180 Light Airplane (French). A Single-Seat Training Monoplane. AC 93, March 1929.
- The "Potez 33" Military Airplane (French). AC 96, June 1929.
- The Amiot S.E.C.M. 110 C.1. A Single-Seat Pursuit Monoplane. AC 97, July 1929.
- The Bernard 20 C.1 (French). A Single-Seat Pursuit Monoplane. AC 98, July 1929.

- Frachet, Andre: The Morane Saulnier 222 Airplane (French). A Single-Seat Pursuit Monoplane. From Les Ailes, June 6, 1929. AC 106, Dec. 1929.
- The Weymann-Lepere W.E.L. 10 Observation Airplane (French). A High-Wing Monoplane. AC 107, Jan. 1930.
- The Liore-Olivier "Le 0.240" Commercial Seaplane (French). A High-Wing Cantilever Monoplane. AC 110, Feb. 1930.
- Les Mureaux "130.A2" Observation Airplane (French). A High-Wing Two-Seat Monoplane. AC 111, March 1930.
- The "Latecoere 28" Commercial Airplane (French). A Ten-Passenger High-Wing Monoplane. AC 112, March 1930.
- The Dyle and Bacalan "DB 70" Commercial Airplane (French). An All-Metal High-Wing Monoplane. AC 113, March 1930.
- The "Potez 39" Observation Airplane (French). An All-Metal High-Wing Two-Seat Monoplane. AC 114, April 1930.
- The Farman "F. 300" Commercial Airplane (French). A High-Wing Semicantilever Monoplane. AC 115, April 1930.
- The Dyle and Bacalan "D.B.80" Day Mail Airplane (French). An All-Metal High-Wing Monoplane. AC 123, Aug. 1930.
- The Wibault 220 R.N. 3 Airplane (French). A Three-Place Observation High-Wing Monoplane. AC 124, Aug. 1930.
- De Marolles, R. J.: The Brequet 270 General Purpose Military Airplane (French). A Two-Seat All-Steel Sesquiplane. AC 127, Sept. 1930.
- The Hanriot H 431 Military Airplane (French). A General Purpose Biplane. AC 133, Jan. 1931.
- The Amiot 140 M Military Airplane (French). An All-Metal Multiplace High-Wing Monoplane. AC 134, Feb. 1931.
- The Dewoitine D.30 Commercial Airplane (French). A High-Wing Cantilever Monoplane. AC 135, Feb. 1931.
- Latecoere 38-O Flying Boat (French). A Long-Range Sesquiplane for Carrying Mail. AC 136, Feb. 1931.
- The Bleriot 110 Airplane (French). A Long Distance High-Wing Monoplane. AC 138, March 1931.
- Leglise, Pierre: The Bernard 120 Seaplane (French). A 1400 HP Single-Seat Monoplane Racer. AC 139, March 1931.

- Specific Types French Airplanes (Cont.)
- The Wibault 280 T.10 Commercial Airplane (French). An All-Metal, Cantilever, Low-Wing Monoplane. AC 140, March 1931.
- The C.A.M.S. 60 Seaplane (French). A Twin Engine Bombing and Torpedo Monoplane. AC 141, April 1931.
- The Mureaux 111 R.2 Military Airplane (French). A Long-Distance All-Metal Observation Monoplane. AC 142, April 1931.
- The S.P.C.A. 40 T Commercial Airplane (French). An All-Metal Cantilever Monoplane. AC 143, April 1931.
- The Mauboussin M 11 Touring Airplane (French). A Two-Place High-Wing Monoplane. AC 145, May 1931.
- The Dewoitine D 33 Commercial Airplane (French). A Low-Wing Cantilever Monoplane. AC 146, June 1931.
- Léglise, Pierre: The Bernard 80 G.R. Long-Distance Airplane (French). A Two-Place Cantilever Monoplane. AC 147, July 1931.
- Breguet 390 T Commercial Airplane (French). A Ten-Seat All-Steel Sesquiplane. AC 149, Aug. 1931.
- Breguet Military Airplane, Type 33. A Two-Place Long-Distance Sesquiplane for Observation and Bombing. AC 151, Sept. 1931.
- Potez 37R2 Military Airplane. A Two-Place Long-Distance Observation Monoplane. AC 152, Sept. 1931.
- The Guillemin J.G. 10 (French). A Two-Place Touring Low-Wing Monoplane. AC 153, Nov. 1931.
- The Loire 11 Colonial Military Airplane (French). A High-Wing Semicantilever All-Metal Monoplane. AC 157, March 1932.
- The C.A.M.S. 80 Amphibian (French). An Observation Monoplane. AC 158, March 1932.
- Léglise, Pierre: The Breguet 410 and 411 Military Airplanes (French). Multiplace Sesquiplane Fighters. AC 163, May 1932.
- The Farman Night Bombers 211 and 212 (French). Four-Engine High-Wing Monoplanes. AC 165, July 1932.
- The Bleriot 137 Military Airplane (French). A Twin-Engine Multiplace Monoplane. AC 169, Aug. 1932.

- The Latécoère 501 Commercial Seaplane (French). A Three-Engine Metal Sesquiplane. AC 170, Sept. 1932.
- The S.P.C.A. 30 M.4 Military Airplane (French). A Multiplace Low-Wing Monoplane. AC 171, Sept. 1932.
- Nieuport-Delage 590 Military Airplane (French). A Two-Place High-Wing Cantilever Monoplane. AC 173, Nov. 1932.
- The Caudron P.V. 200 Touring Airplane (French). An All-Metal Amphibian Monoplane. AC 176, April 1933.
- The Dewoitine D.500 Pursuit Airplane (French). An All-Metal Cantilever Low-Wing Monoplane. AC 180, May 1933.
- The Hanriot-Biche 110 Cl Airplane (French). An All-Metal Low-Wing Pursuit Monoplane. AC 182, July 1933.
- The Dewoitine D.332 Commercial Airplane (French). A Three-Engine All-Metal Low-Wing Monoplane. AC 185, Dec. 1933.
- The Bernard 82 Military Airplane (French). A Long-Range Monoplane. AC 192, June 1934.
- The Latécoère 521 "Lieutenant De Vaisseau Paris" Commercial Flying Boat (French). A Two-Deck Six-Engine Semicantilever Sesquiplane. AC 202, March 1936.

GERMAN (1.7.1.2)

- Langsdorff, Werner V.: The Rumpler Passenger Airplane. TM 6, March 1921.
- Hoff, Wilhelm: The Development of German Army Airplanes During the War. TN 56, June 1921.
- Rohrbach, K.: The 1000 HP Traffic Airplane of the Zeppelin Works in Staaken. TM 42, Sept. 1921.
- Blume, W.: <u>The Glider</u> of the College Aviation Group of the Technical High School, Hanover. TM 59, Jan. 1922.
- Munk, Max and Molthan, Wilhelm: Tests on an Airplane Model, AEG D I of the Allgemeine Elektricitats Gesellschaft, A-G, Airplane Construction Section Conducted at the Gottingen Model Testing Laboratory for Aerodynamics. TN 128, Feb. 1923.
- Meyer, G.: New Albatros Commercial Airplane "L 58." TM 195, March 1923.

- Specific Types German Airplanes (Cont.)
- Molthan, Wilhelm: Tests on a Model of the D Airplane T 39 of the "Deutsche Flugzeug Werke" (German Airplane Works). TN 175, Jan. 1924.
- Development of Wing-Steered Messerschmitt Gliders. From "Flugsport," April 15, 1924. TM 265, June 1924.
- Training Airplane, Type H.E.18, of the Ernst Heinkel Airplane Works at Warnemunde. MP 18, Jan. 1926.
- Manigold, G.: German Training Airplane, Arado "Ar. S.I." AC 4, May 1926.
- All-Metal Junkers Airplane, Type F 13. AC 6, May 1926.
- The Albatros L 72A. A German Newspaper Carrier with Slotted Wings. AC 8, June 1926.
- Heinkel Airplane H.D.39 for Carrying Newspapers. AC 13, Aug. 1926.
- Ruhl, Karl and Wiederhold, Hasso: Albatros Commercial Airplane L 73. AC 16, Sept. 1926.
- Rohrbach All Metal Commercial Airplane RO VIII "Roland." AC 24, Dec. 1926.
- Fairbanks, A. J.: Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. Rept. 254, 1927.
- The "Dornier Mercury" Commercial Airplane with B.M.W. VI 600 HP. Engine. AC 30, Feb. 1927.
- Dornier "Superwal" Commercial Seaplane. Two Rolls-Royce "Condor" 650 HP. Engines. AC 31, Feb. 1927.
- The Rohrbach "Robbe" RO VII Seaplane. (Military or Commercial). AC 36, April 1927.
- Heinkel H.E.5 Commercial Seaplane. (Winner of the 1926 German Seaplane Contest at Warnemunde). AC 38, April 1927.
- The Rohrbach "Rocco" Seaplane. New German Commercial Seaplane with Two Rolls-Royce "Condor" Engines. AC 44, June 1927.
- Serryer, J.: Focke-Wulf "G.L.18." Twin-Engine 150 HP. Commercial Airplane. AC 46, June 1927.

- Junkers Commercial Airplane G 31. From "Zeitschrift des Vereines deutscher Ingenieure" May 7, 1927. AC 54, Aug. 1927.
- Training Airplane "Arado SC 1." From "Flugwoche," June 22, 1927. AC 56, Sept. 1927.
- Camm, F. J.: Building a Full-Size Glider. TM 429, Sept. 1927.
- The Focke-Wulf F.19 "Ente" Tail-First Airplane. AC 59, Oct. 1927.
- Gymnich, Alfried: Some German Gliders of 1920-1923. TM 433, Oct. 1927.
- Gymnich, Alfried: Glider Construction and Design. TM 434, Oct. 1927.
- The Heinkel Commercial Airplane H.D. 40. AC 64, Dec. 1927.
- Focke-Wulf A 17 Commercial Airplane "Mowe" (German). AC 66, Feb. 1928.
- The Fokker "Universal" Commercial Airplane. AC 73, May 1928.
- The "K 47" of the A.B. Flygindustri. An Armored Pursuit Monoplane. AC 100, Aug. 1929.
- Hubner, Walter: Relation Between the Stability Characteristics and the Controllability of German Airplanes. TM 551, Feb. 1930.
- The Dornier "Do. X" Flying Boat (German). A Giant High-Wing Monoplane. AC 109, Feb. 1930.
- Lippisch, Alexander: Recent Tests of Tailless Airplanes. TM 564, May 1930.
- The Junkers "G 38" Commercial Airplane (German). A Giant High-Wing Monoplane. AC 116, May 1930.
- The "Junkers-Junior" Light Airplane (German). A Two-Seat All-Metal Low-Wing Cantilever. AC 118, June 1930.
- Blenk, Hermann: Gottingen Six-Component Scale Measurements on a Junkers A 35 Airplane Model. TM 586, Oct. 1930.
- Focke-Wulf F 19a "Ente" Commercial Airplane (German). A Tail-First High-Wing Monoplane. AC 132, Jan. 1931.
- Kiel, Heinrich Georg: Static Longitudinal Stability of "Ente" Airplanes. TM 612, March 1931.
- Lippisch, A.: The Development, Design and Construction of Gliders and Sailplanes. TM 637, Sept. 1931.

- Specific Types German Airplanes (Cont.)
- The Dornier Do K Commercial Airplane (German). A High-Wing Cantilever Monoplane. AC 155, Jan. 1932.
- The Dreieck I Tailless Airplane (German). A Low-Wing Cantilever Monoplane. AC 159, March 1932.
- Lademann, Robert W. E.: Development of Tailless and All-Wing Gliders and Airplanes. TM 666, April 1932.
- The Messerschmidt M.29 Touring Airplane (German). A Two-Seat Cantilever Monoplane. AC 172, Nov. 1932.
- Heinkel He 64 c Sport Airplane (German). A Two-Seat Low-Wing Cantilever Monoplane. AC 175, Feb. 1933.
- Heinkel HE 70 Commercial Airplane (German). A Seven-Seat Cantilever Low-Wing Monoplane. AC 183, Aug. 1933.
- Hubner, Walter: Results of Extended Tests of the Focke-Wulf F 19a "Ente," a Tail-First Airplane. TM 721, Sept. 1933.
- Schrenk, M.: High-Speed Aircraft. TM 745, May 1934.
- Heinkel, Ernst: The High-Speed Heinkel HE 70 Mail Airplane. TM 746, May 1934.
- Shenstone, B. S. and Scott-Hall, S.: Glider Development in Germany. A Technical Survey of Progress in Design in Germany Since 1922. TM 780, Nov. 1935.
- Rodert, Lewis A. and Jackson, Richard: A Description of the Ju 88 Airplane Anti-Icing Equipment. RB, Aug. 1942.
- Höhler, P.: The Influence of the Application of Power During Spin Recovery of Multiengine Airplanes. TM 1219, June 1949.
- Höhler, P. and Koppen, I. v.: Experimental Flights for Testing of a Reactor as an Expedient for the Termination of Dangerous Spins. TM 1221, July 1949.

ITALIAN (1.7.1.2)

- Munk, Max: The Caproni Seaplane. TN 57, July 1921.
- Macchi M.39 Seaplane. Single-Seat Racer with an 800 HP. Fiat "A-S2" Engine. AC 32, March 1927.
- "Savoia" Seaplane S.55. (Military or Commercial). AC 33, March 1927.

- Caproni Airplane Ca 73 (Commercial) and Ca 73 ter (Military). AC 51, March 1927.
- Fiat C.R. 20 Pursuit Airplane. AC 43, May 1927.
- Savoia Marchetti "S 64" Airplane. AC 78, Aug. 1928.
- The Caproni Monoplanes "Ca 97" (Italian). AC 84, Oct. 1928.
- The Caproni "90 P.B." Military Airplane (Italian). A Giant Biplane of 6000 Horsepower. AC 121, July 1930.
- The Fiat "T.R. 1" Training and Touring Airplane (Italian). A Two-Place High-Wing Monoplane. AC 130, Dec. 1930.
- The Breda 32 Commercial Airplane (Italian). A Three-Engine All-Metal Low-Wing Monoplane. AC 166, Aug. 1932.
- Stipa, Luigi: Stipa Monoplane with Venturi Fuselage. TM 753, Sept. 1934.

MISCELLANEOUS FOREIGN (1.7.1.2)

- Fairbanks, A. J.: Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. Rept. 254, 1927.
- Vojenska-Smolik S.16 Airplane. All-Metal Long-Distance Observation Biplane. From "Flight," Jan. 13, 1927. AC 34, March 1927.
- The Fokker "Trimotor F VII" Commercial Transport Monoplane. AC 76, June 1928.
- The A.B. Flygindustri "K 37" (Swedish Junkers). A Low-Wing All-Metal Military Airplane. AC 104, Oct. 1929.
- The "Comte A.C. 3" Military Airplane (Swiss). A High-Wing Semicantilever Monoplane. AC 122, July 1930.
- Polish P Type Single-Seat Fighters. All-Metal Gull-Type Wing Monoplane. AC 137, March 1931.
- Frachet, Andre: The "I.A.R." Pursuit Airplane (Roumanian). A One-Place Cantilever Low-Wing Monoplane. AC 144, May 1931.
- The S.A.B.C.A. "S.XI" Commercial Airplane (Belgian). A High-Wing Semicantilever Monoplane. AC 160, April 1932.
- Fokker F.XX Commercial Airplane (Dutch). A High-Wing Cantilever Monoplane. AC 187, Feb. 1934.

- Miscellaneous Foreign Airplanes (Cont.)
- The Avia 51 Commercial Airplane (Czechoslovakian). A Cantilever High-Wing Monoplane. AC 188, Feb. 1934.

PERFORMANCE (1.7.1.3)

- Wilson, Edwin Bidwell: The Limiting Velocity in Falling from a Great Height. Rept. 78, 1919.
- Coffin, J. G.: A Study of Airplane Ranges and Useful Loads. Rept. 69, 1920.
- De Bothezat, George: General Theory of the Steady Motion of an Airplane. Rept. 97, 1921.
- Kemble, E. C.: The Calculated Performance of Airplanes Equipped with Supercharging Engines. Rept. 101, 1921.
- Munk, Max: The Caproni Seaplane. TN 57, July 1921.
- Pegna, G.: High Efficiency of Seaplanes. TM 32, Aug. 1921.
- Heidelberg, V.: Influence of Struts and Stays on the Speed of an Airplane. TM 46, Oct. 1921.
- Warner, Edward P.: The Choice of Wing Sections for Airplanes. TN 73, Nov. 1921.
- Munk, Max M.: The Choice of the Speed of an Airship. TN 89, March 1922.
- Munk, Max M.: Full Scale Determination of the Lift and Drag of a Seaplane. TN 92, April 1922.
- Hoff, Wilhelm: Rhon Soaring Flight Competition, 1921. TM 100, June 1922.
- Diehl, Walter S.: Simple Formula for Estimating Airplane Ceilings. TN 103, June 1922.
- Effect of Structure in Middle Part of Leading Edge of a Thick Wing. TM 103, June 1922.
- Richard, Paul and Maurice: General Problem of the Airplane. TM 118, July 1922.
- Warner, Edward P.: Giant Airplanes. TM 138, Sept. 1922.
- Schrenk, M.: Aerodynamic Computation of Gliders. TM 140, Sept. 1922.
- Warner, Edward P.: Miniature Airplanes. TM 141, Sept. 1922.

- Diehl, W. S., Lieut., Bureau of Aeronautics, USN: F-5-L Boat Seaplane - Performance Characteristics. TN 118, Oct. 1922.
- Warner, Edward P.: The Development of the Racing Airplane. TM 152, Nov. 1922.
- Warner, Edward P.: Lessons of the Glider Meets. TM 166, Nov. 1922.
- Norton, F. H. and Brown, W. G.: A Preliminary Study of Airplane Performance. TN 120, Nov. 1922.
- Warner, Edward P.: Airplane Performance, Past and Present. TM 173, Dec. 1922.
- Black, Archibald: Influence of Design on Cost of Operating Airplanes. TM 176, Dec. 1922.
- Hoff, Wilhelm: Soaring Flight and the Rhon Contest, Jan. 1923. MP 13, 1923.
- Warner, Edward P.: Airplane Speeds of the Future. TM 178, Jan. 1923.
- Hoff, Wilhelm: Soaring Flight and the Rhon Contests. TM 181, Jan. 1923.
- Prandtl, L.: Lessons of the 1922 Rhon Soaring Flights. TM 186, Feb. 1923.
- Baldit, M. Albert: Atmospheric Waves and Their Utilization in Soaring Flight. TM 194, March 1923.
- Brown, W. G.: Measuring an Airplane's True Speed in Flight Testing. TN 135, April 1923.
- Everling, E., Dr.: Speed Limits of Aircraft. TM 203, May 1923.
- Miller, Roy G. and Brown, B. T.: The "Turkey Buzzard" Glider. TM 214, June 1923.
- Koenig, Georg: Thrust and Power Required in Climbing. TN 152, Aug. 1923.
- Student, Captain: Flight Characteristics. TN 153, Aug. 1923.
- Rohrbach, Adolf and Lupberger, Edwin: Graphic Method for Calculating the Speed and Climbing Ability of Airplanes. TN 163, Oct. 1923.
- Warner, Edward P.: Shortening the Landing Run. TM 231, Oct. 1923.
- Blasius, H.: Determination of Climbing Ability. TN 166, Nov. 1923.
- Diehl, Walter S.: Charts for Graphical Estimation of Airplane Performance. Rept. 192, 1924.

- Performance Airplanes (Cont.)
- Von Sanden, H.: Significance of the Expression CL³/CD². TN 173, Jan. 1924.
- Kann, Heinrich: Airplanes in Horizontal Curvilinear Flight. TN 174, Jan. 1924.
- Salkowski, E.: Curvilinear Flight of Airplanes. TN 176, Jan. 1924.
- Von Langsdorff, Werner: Remarks on Building of Low-Powered Airplanes. TM 246, Jan. 1924.
- Warner, Edward P.: Specializing for Record-Breaking. TM 248, Feb. 1924.
- Munk, Max M. and Warner, Edward P.: Comparing the Performance of Geometrically Similar Airplanes. TN 190, April 1924.
- King, Paul B. and Carroll, Thomas: High Altitude Flying. TN 193, May 1924.
- Burgess, C. P.: A Method of Determining the Dimensions and Horsepower of an Airship for Any Given Performance. TN 194, May 1924.
- Development of Wing-Steered Messerschmitt Gliders. From "Flugsport," April 15, 1924. TM 265, June 1924.
- Anon.: Experiments with a Device for Shortening the Glide and Landing Run of an Airplane. TM 272, July 1924.
- Cronstedt, Val.: The Logarithmic Polar Curve - Its Theory and Application to the Predetermination of Airplane Performance. TN 205, Oct. 1924.
- Diehl, Walter S.: Reliable Formulae for Estimating Airplane Performance and the Effects of Changes in Weight, Wing Area, or Power. Rept. 173, 1925.
- Diehl, Walter S.: A Study of the Effect of a Diving Start on Airplane Speed. Rept. 228, 1925.
- Panetti, M.: Aerodynamic Characteristics of Aircraft with Reference to Their Use. TM 339, 1925.
- Light Airplanes of France, Germany, Italy, Belgium, Holland, Czechoslovakia and Lithuania. Compiled by the NACA. TM 301, Feb. 1925.
- Driggs, Ivan H.: The Light Airplane.
 Brief Review of the Results Obtained in
 the Development of Light Airplanes I.
 Modern Theoretical Aerodynamics as
 Applied to Light Airplane Design II.
 TM 311, April 1925.

- Warner, Edward P. and Ober, Shatswell: The Estimation of Airplane Performance from Wind Tunnel Tests on Conventional Airplane Models. TN 218, May 1925.
- Diehl, Walter S.: Three Methods of Calculating Range and Endurance of Airplanes. Rept. 234, 1926.
- Diehl, Walter S.: The Effect of Flight Path Inclination on Airplane Velocity. Rept. 238, 1926.
- Koppe, Heinrich: Flight Tests on Airplanes. TM 359, April 1926.
- Lachmann, G.: Development of Light and Small Airplanes. TM 370, July 1926.
- Pröll, A.: Take-Off Distance for Airplanes. TM 381, Sept. 1926.
- Carroll, Thomas: A Comparison of the Take-Off and Landing Characteristics of a Number of Service Airplanes. Rept. 249, 1927.
- Raethjen, P.: Kinetographic Determination of Airplane Flight Characteristics. TM 409, April 1927.
- Walker, C. C.: Climbing Efficiency of Aircraft. TM 415, June 1927.
- Hall, Donald A.: Technical Preparation of the Airplane "Spirit of St. Louis." TN 257, July 1927.
- Von Parseval, August: Lindbergh's Flight. TM 423, Aug. 1927.
- Diehl, Walter S.: The Reduction of Observed Airplane Performance to Standard Conditions. Rept. 297, 1928.
- Carroll, Thomas: The Effect on Performance of a Cutaway Center Section. TN 273, Jan. 1928.
- The 1926 German Seaplane Contest. Seewald, F.: Part I: Lessons Taught. Blenk, H. and Liebers, F.: Part II: Method of Rating. TM 454, March 1928.
- Schrenk, Martin: Calculation of Airplane Performances Without the Aid of Polar Diagrams. TM 456, March 1928.
- Schrenk, Martin: A Few More Mechanical-Flight Formulas Without the Aid of Polar Diagrams. TM 457, March 1928.
- Pröll, A.: Take-Off of Heavily Loaded Airplanes. TM 460, April 1928.
- Von Römer, B.: Prospective Development of Giant Airplanes. TM 463, May 1928.

- Performance Airplanes (Cont.)
- Hübner, W.: Technical Progress Shown in the 1927 Rhön Soaring-Flight Contest. TM 471, July 1928.
- Lachmann, G.: The Span as a Fundamental Factor in Airplane Design. TM 479, Sept. 1928.
- Breguet, Louis: On the Take-Off of Heavily Loaded Airplanes. TM 489, Nov. 1928.
- Lesley, E. P. and Reid, E. G.: A New Method for the Prediction of Airplane Performance. TN 302, Feb. 1929.
- Lippisch, A.: Technical Report of the 1928 Rhön Soaring-Flight Contest. TM 514, May 1929.
- Carroll, Thomas and DeFrance, Smith J.: The Use of Wheel Brakes on Airplanes. TN 311, July 1929.
- Töpfer, Carl: Airplane Drag. TM 544, Dec. 1929.
- Diehl, Walter S.: A New Chart for Estimating the Absolute Ceiling of an Airplane. Rept. 368, 1930.
- Lippisch, Alexander: The 1929 Rhön Soaring-Flight Contest. TM 560, April 1930.
- Pillard, M.: Improving the Performance of Multi-Engined Airplanes by Means of Idling Propellers. The "Free-Wheel" Propeller. TM 561, April 1930.
- Ridley, Kenneth F.: An Investigation of Airplane Landing Speeds. TN 349, Sept. 1930.
- Gough, Melvin N.: Effect of the Angular Position of the Section of a Ring Cowling on the High Speed of an XF7C-1 Airplane. TN 355, Nov. 1930.
- Dearborn, C. H. and Kirschbaum, H. W.: Maneuverability Investigation of an F6C-4 Fighting Airplane. Rept. 386, 1931.
- Weick, Fred E.: The Behavior of Conventional Airplanes in Situations Thought to Lead to Most Crashes. TN 363, Feb. 1931.
- Georgii, Walter: Eleventh Rhön Soaring-Flight Contest, 1930. TM 623, June 1931.
- Louden, F. A.: Estimated Effect of Ring Cowl on the Climb and Ceiling of an Airplane. MP 26, June 1931.

- Lippisch, A.: The Development, Design and Construction of Gliders and Sailplanes. TM 637, Sept. 1931.
- Soulé, Hartley A.: The Effect of Slots and Flaps on the Lift and Drag of the McDonnell Airplane as Determined in Flight. TN 398, Nov. 1931.
- Oswald, W. Bailey: General Formulas and Charts for the Calculation of Airplane Performance. Rept. 408, 1932.
- McAvoy, William H.; Schey, Oscar W. and Young, Alfred W.: The Effect on Airplane Performance of the Factors that Must Be Considered in Applying Low-Drag Cowling to Radial Engines. Rept. 414, 1932.
- Weick, Fred E.: Preliminary Investigation of Modifications to Conventional Airplanes to Give Nonstalling and Short-Landing Characteristics. Rept. 418, 1932.
- Diehl, Walter S.: Static Thrust of Airplane Propellers. Rept. 447, 1932.
- Diehl, Walter S.: The Calculation of Take-Off Run. Rept. 450, 1932.
- De Caria, Ugo: Airplane Flight in the Stratosphere. TM 660, Feb. 1932.
- Windler, Ray: The Effect of Propellers and Nacelles on the Landing Speeds of Tractor Monoplanes. TN 420, May 1932.
- Georgii, Walter: Twelfth Rhön Soaring Contest, 1931. TM 671, May 1932.
- Soulé, Hartley A.: Flight Tests to Determine the Effect of a Fixed Auxiliary Airfoil on the Lift and Drag of a Parasol Monoplane. TN 440, Dec. 1932.
- Thompson, F. L. and Kirschbaum, H. W.: Maneuverability Investigation of an "O3U-1" Observation Airplane. Rept. 457, 1933.
- DeFrance, Smith J.: The Aerodynamic Effect of a Retractable Landing Gear. TN 456, March 1933.
- Weyl, Alfred Richard: The Schneider Trophy Contest. TM 712, June 1933.
- Hubner, Walter: Results of Extended Tests of the Focke-Wulf F 19a "Ente," a Tail-First Airplane. TM 721, Sept. 1933.
- The 1933 Contest for the Deutsch de la Meurthe Trophy - Leglise, Pierre: Airplanes Participating in the Contest. Hirschauer, L.: Engines Used on the Airplanes. Saladin, Raymond: Lessons Learned from the Contest. TM 724, Nov. 1933.

- Performance Airplanes (Cont.)
- Thompson, F. L.; Peck, W. C. and Beard, A. P.: Air Conditions Close to the Ground and the Effect on Airplane Landings. Rept. 489, 1934.
- Schrenk, M.: High-Speed Aircraft. TM 745, May 1934.
- Kosin, R.: The Effect of Weight and Drag on the Sinking Speed and Lift/Drag Ratio of Gliders. TM 759, Dec. 1934.
- Schulz, R. and Pleines, W.: Technical Aspects of the 1934 International Touring Competition (Rundflug). TM 760, Dec. 1934.
- Georgii, W.: Gliding in Convection Currents. TM 761, Jan. 1935.
- Lippisch, A.: Effect of Aerodynamic Design on Glider Performance. TM 762, Feb. 1935.
- Leglise, Pierre: The 1934 Contest for the Deutsche de la Meurthe Trophy. TM 765, Feb. 1935.
- Le Sueur, Maurice: Ground Effect on the Take-Off and Landing of Airplanes. TM 771, July 1935.
- Scudder, N. F. and Kirschbaum, H. W.: A Preliminary Determination of Normal Accelerations on Racing Airplanes. TN 537, Aug. 1935.
- Wetmore, J. W.: Calculated Effect of Various Types of Flap on Take-Off over Obstacles. TN 568, May 1936.
- Dearborn, C. H. and Soulé, H. A.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with a Fowler Flap. TN 578, Aug. 1936.
- White, Roland J. and Martin, Victor J.: Charts for Calculating the Performance of Airplanes Having Constant-Speed Propellers. TN 579, Sept. 1936.
- Rhode, Richard V. and Pearson, Henry A.: Flight Tests of the Drag and Torque of the Propeller in Terminal-Velocity Dives. Rept. 599, 1937.
- Biermann, David: A Study of the Factors Affecting the Range of Airplanes. TN 592, Feb. 1937.
- Dearborn, C. H. and Soulé, H. A.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with a Zap Flap and Zap Ailerons. TN 596, March 1937.
- Wetmore, J. W.: The Transition Phase in the Take-off of an Airplane. Rept. 626, 1938.

- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Hartman, Edwin P.: Wind-Tunnel Tests of a 2-Engine Airplane Model as a Preliminary Study of Flight Conditions Arising on the Failure of One Engine. TN 646, April 1938.
- Rockefeller, W. C.: General Airplane Performance. Rept. 654, 1939.
- Diehl, Walter S.: Some Fundamental Considerations in Regard to the Use of Power in Landing an Airplane. TN 692, March 1939.
- Stickle, George W.: Flight Tests of NACA Nose-Slot Cowlings on the BFC-1 Airplane. TN 720, Aug. 1939.
- Gothort, B.: Effect of Wing Loading, Aspect Ratio, and Span Loading on Flight Performances. TM 925, Jan. 1940.
- Worley, Brian: Fighter Fundamentals. MP 44, March 1940.
- Turner, L. Richard: Consideration of Auxiliary Jet Propulsion for Assisting Take-Off. ACR (WR E-49), May 1940.
- Stepniewski, Wieslaw: Air Transport by Gliders. Some Technical Observations. TM 980, June 1941.
- Pearson, H. A. and Garvin, J. B.: Velocity Gained and Altitude Lost in Recoveries from Inclined Flight Paths. TN 829, Oct. 1941.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Several Factors Affecting the Performance of a High-Speed Pursuit Airplane with Air-Cooled Radial Engine. ACR, Nov. 1941.
- Pearson, H. A. and Anderson, R. F.: A Brief Study of the Speed Reduction of Overtaking Airplanes by Means of Air Brakes. ACR, May 1942.
- Wetmore, J. W.: Study of Turning Performance of a Fighter-Type Airplane Particularly as Affected by Flaps and Increased Supercharging. ACR, June 1942.
- Gustafson, F. B.: Tire Friction Coefficients and Their Relation to Ground-Run Distance in Landing. ARR (WR L-245), June 1942.
- Brevoort, Maurice J.; Stickle, George W. and Hill, Paul R.: Generalized Selection Charts for Bombers Powered by Two, Four, and Six 3000-Horsepower Engines. MR (WR L-670), Aug. 1942.

- Performance Airplanes (Cont.)
- Donlan, C. J. and Letko, W.: The Effect of Cowling Shape on the Stability Characteristics of an Airplane. ARR (WR L-343), Sept. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Johnston, J. Ford: Review of Flight Tests of NACA C and D Cowlings on the XP-42 Airplane. Rept. 771, 1943.
- Johnson, Harold I.: Determination of Flight Paths of an SBD-1 Airplane in Simulated Diving Attacks. ACR, March 1943.
- Pearson, H. A.: Time-Velocity-Altitude Relations for an Airplane Diving in a Standard Atmosphere. ARR (WR L-291), March 1943.
- Jones, Robert T. and Wetmore, Joseph W.: Emergency Measures for Increasing the Range of Fighter Airplanes. RB 3E31 (WR L-223), May 1943.
- Harmon, Sidney M.: Determination of the Effect of Wing Flexibility on Lateral Maneuverability and a Comparison of Calculated Rolling Effectiveness with Flight Results. ARR 4A28 (WR L-525), Jan. 1944.
- Ankenbruck, Herman O.: Maximum Lift Coefficients of Airplanes Based on Sum of Wing and Tail Areas. RB L4C31 (WR L-556), March 1944.
- Gustafson, F. B. and O'Sullivan, William J., Jr.: The Effect of High Wing Loading on Landing Technique and Distance, with Experimental Data for the B-26 Airplane. ARR L4K07 (WR L-160), Jan. 1945.
- Yegorov, B. N.: New Method of Determining the Polar Curve of an Airplane in Flight. TM 1076, March 1945.
- Beeler, De E. and Williams, Walter C.: Flight Tests of Dive-Recovery Flaps on an XP-51 Airplane. ACR L5D20a, May 1945.
- Talmage, Donald B.: Determination from Flight Tests of Thrust Coefficients for 10 Full-Scale Airplanes in the Gliding Condition with Engine Idling. RB L5F08 (WR L-88), June 1945.
- Bielat, Ralph P.: A Simple Method for Estimating Terminal Velocity Including Effect of Compressibility on Drag. ACR L5G31 (WR L-78), Aug. 1945.

- Hill, Paul R.: Parameters Determining Performance of Supersonic Pilotless Airplanes Powered by Ram-Compression Power Plants. ACR L6D17, June 1946.
- Byrne, Robert W.: A Method of Selecting Rocket Thrust for Experimental Supersonic Airplanes. RB L6G22, Aug. 1946.
- Wood, George P.: Performance Possibilities of the Turbojet System as a Power Plant for Supersonic Airplanes. RM L7H05a, Sept. 1946.
- Weise, A.: Practical Possibilities of High-Altitude Flight with Exhaust-Gas Turbines in Connection with Spark Ignition Engines Comparative Thermodynamic and Flight Mechanical Investigations. TM 1124, April 1947.
- Ankenbruck, Herman O. and McKinney, Marion O., Jr.: Generalized Performance Comparison of Large Conventional, Tail-Boom, and Tailless Airplanes. TN 1477, Oct. 1947.
- Ivey, H. Reese; Bowen, Edward N., Jr. and Oborny, Lester F.: Introduction to the Problem of Rocket-Powered Aircraft Performance. TN 1401, Dec. 1947.
- Horton, Elmer A. and Quinn, John H., Jr.:
 Analysis of the Effects of BoundaryLayer Control on the Take-Off Performance Characteristics of a LiaisonType Airplane. TN 1597, June 1948.
- Hanson, Frederick H., Jr. and Mossman, Emmet A.: Effect of Pressure Recovery on the Performance of a Jet-Propelled Airplane. TN 1695, Sept. 1948.
- Anderson, Seth B.; Gadeberg, Burnett L. and McAvoy, William H.: Effect of a 90° Cross Wind on the Take-Off Distance of a Light Airplane Equipped with a Cross-Wind Landing Gear. TN 1898, June 1949.
- Lange, Roy H.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.

MISSILES

Daum, Fred L. and Sawyer, Richard H.:
Tests at Transonic Speeds of the Effectiveness of a Swept-Back Trailing-Edge Flap on an Airfoil Having Parallel Flat Surfaces, Extreme Sweepback, and Low Aspect Ratio. CB L5H01, Sept. 1945.

Missiles (Cont.)

- Stamm, G.: Investigations of Pressure Distribution on Fast Flying Bodies. TM 1101, Sept. 1946.
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.

COMPONENTS IN COMBINATION (1.7.2.1)

Spreiter, John R.: Aerodynamic Properties of Cruciform-Wing and Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1897, June 1949.

Wing-Body Combinations - Missiles (1.7.2.1.1)

- Holtzclaw, Ralph W. and Erickson, Myles D.: Wind-Tunnel Investigation of Flap, Aileron, and Exterior Bomb Installations on a 24-Inch Constant-Chord North American XB-28 Wing Model. ARR, July 1942.
- Bailey, F. J., Jr.; Mathews, Charles W. and Thompson, Jim Rogers: Drag Measurements at Transonic Speeds on a Freely Falling Body. ACR L5E03, June 1945.
- Kehl: Wind-Tunnel Measurements on the Wing of the Henschel Missile "Zitterrochen" in Subsonic and Supersonic Velocities. TM 1159, April 1948.
- Ivey, H. Reese and Morrissette, Robert R.: An Approximate Determination of the Lift of Slender Cylindrical Bodies and Wing-Body Combinations at Very High Supersonic Speeds. TN 1740, Oct. 1948.
- Nielsen, Jack N. and Matteson, Frederick H.: Calculative Method for Estimating the Interference Pressure Field at Zero Lift on a Symmetrical Swept-Back Wing Mounted on a Circular Cylindrical Body. RM A9E19, Aug. 1949.

Tail-Body (1.7.2.1.2)

- Bailey, F. J., Jr.; Mathews, Charles W. and Thompson, Jim Rogers: Drag Measurements at Transonic Speeds on a Freely Falling Body. ACR L5E03, June 1945.
- Thompson, Jim Rogers and Mathews, Charles W.: Total Drag of a Body of Fineness Ratio 12 and Its Stabilizing Tail Surfaces Measured During Free Fall at Transonic Speeds. CB L6D08, April 1946.

Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.

Jet Interference (1.7.2.1.3)

- Ribner, Herbert S.: Field of Flow About a Jet and Effect of Jets on Stability of Jet-Propelled Airplanes. ACR L6C13, (WR L-213), April 1946.
- Falk, H.: The Influence of the Jet of a Propulsion Unit on Nearby Wings. TM 1104, Sept. 1946.

SPECIFIC MISSILES (1.7.2.2)

- Wilson, Edwin Bidwell: Bomb Trajectories. Rept. 79, 1920.
- Pearson, E. O., Jr.: Aerodynamic Tests of an AN-M-65-Azon 1000-Pound Radio-Controlled Bomb in the LMAL 16-Foot High-Speed Tunnel. MR (WR L-131), June 1944.
- Kehl: Wind-Tunnel Measurements on the Wing of the Henschel Missile "Zitterrochen" in Subsonic and Supersonic Velocities. TM 1159, April 1948.
- Gothert, B.: Comparison of Drop and Wind-Tunnel Experiments on Bomb Drag at High Subsonic Speeds. TM 1186, May 1948.
- Huston, Wilber B.; Warfield, Calvin N. and Stone, Anna Z.: A Study of Skin Temperatures of Conical Bodies in Supersonic Flight. TN 1724, Oct. 1948.

ROTATING WING AIRCRAFT

(1.7.3)

- Breguet, Louis: The Gyroplane Its Principles and Its Possibilities. TM 816, Jan. 1937.
- Hohenemser, K.: Performance of Rotating-Wing Aircraft. TM 871, July 1938.
- Gessow, Alfred: Standard Symbols for Helicopters. TN 1604, June 1948.

AUTOGIROS (1.7.3.1)

Lame, M.: Abstracts from the French Technical Press. Study of the Resistance Offered by Propellers Rotating on an Airstream. TM 21, April 1921.

- Autogiros Rotating Wing Aircraft (Cont.)
- Moreno-Caracciolo, M.: The "Autogiro." TM 218, July 1923.
- Seiferth, R.: Testing a Windmill Airplane ("Autogiro"). TM 394, Jan. 1927.
- The Cierva "Autogiro" Mark III (British) Armstrong-Siddeley "Genet Major" Engine. AC 120, June 1930.
- Wheatley, John B.: Lift and Drag Characteristics and Gliding Performance of an Autogiro as Determined in Flight. Rept. 434, 1932.
- Wheatley, John B.: Wing Pressure Distribution and Rotor-Blade Motion of an Autogiro as Determined in Flight. Rept. 475, 1933.
- Bennett, J. A. J.: The Flight of an Autogiro at High Speed. TM 729, Dec. 1933.
- Wheatley, John B.: The Aerodynamic Analysis of the Gyroplane Rotating-Wing System. TN 492, March 1934.
- Peck, William C.: Landing Characteristics of an Autogiro. TN 508, Nov. 1934.
- Wheatley, John B. and Hood, Manley J.: Full-Scale Wind-Tunnel Tests of a PCA-2 Autogiro Rotor. Rept. 515, 1935.
- Wheatley, John B.: The Influence of Wing Setting on the Wing Load and Rotor Speed of a PCA-2 Autogiro as Determined in Flight. Rept. 523, 1935.
- Wheatley, John B. and Bioletti, Carlton: Wind-Tunnel Tests of a 10-Foot-Diameter Gyroplane Rotor. Rept. 536, 1935.
- Hartman, Edwin P.: Considerations of the Take-Off Problem. TN 557, Feb. 1936.
- Wheatley, John B.: A Study of Autogiro Rotor-Blade Oscillations in the Plane of the Rotor Disk. TN 581, Sept. 1936.
- Wheatley, John B. and Bioletti, Carlton: Analysis and Model Tests of Autogiro Jump Take-Off. TN 582, Oct. 1936.
- Schrenk, M.: Static Longitudinal Stability and Longitudinal Control of Autogiro Rotors. TM 879, Oct. 1938.
- Bailey, Frederick J., Jr.: A Flight Determination of the Moments of the YG-1B Tapered Blade Rotor About the Hub Trunnions. MR, Nov. 1939.
- Bailey, F. J., Jr. and Gustafson, F. B.: Observations in Flight of the Region of Stalled Flow over the Blades of an Autogiro Rotor. TN 741, Dec. 1939.

- Bailey, F. J., Jr.: A Simplified Theoretical Method of Determining the Characteristics of a Lifting Rotor in Forward Flight. Rept. 716, 1941.
- Gustafson, F. B. and Gessow, Alfred: Analysis of Flight-Performance Measurements on a Twisted, Plywood-Covered Helicopter Rotor in Various Flight Conditions. TN 1595, June 1948.
- Gessow, Alfred: Bibliography of NACA Papers on Rotating-Wing Aircraft June 1948. RM L7J30, July 1948.
- Nikolsky, A. A. and Seckel, Edward: An Analytical Study of the Steady Vertical Descent in Autorotation of Single-Rotor Helicopters. TN 1906, June 1949.

HELICOPTERS (1.7.3.2)

- Warner, E. P.: The Problem of the Helicopter. TN 4, May 1920.
- Toussaint, A.: Drag or Negative Traction of Geared-Down Supporting Propellers in the Downward Vertical Glide of a Helicopter. TN 21, Sept. 1920.
- The Oehmichen Peugeot Helicopter. (Translated by Paris Office, NACA). TM 13, March 1921.
- Recent European Developments in Helicopters. By Paris Office, NACA. TN 47, April 1921.
- Warner, Edward P.: The Prospects of the Helicopter. TM 107, June 1922.
- Balaban, Karl: Evolution of the Helicopter. TM 196, March 1923.
- Oemichen, Etienne: My Experiments with Helicopters. TM 199, April 1923.
- Crocco, Arturo G.: Inherent Stability of Helicopters. TM 234, Oct. 1923.
- Klemin, Alexander: An Introduction to the Helicopter. TM 340, 1925.
- Schrenk, Martin: Aerodynamic Principles of the Direct Lifting Propeller. TM 733, Jan. 1934.
- Kussner, H. G.: Helicopter Problems: TM 827, May 1937.
- Focke, H.: The Focke Helicopter. TM 858, April 1938.
- Hohenemser, K.: Dynamic Stability of a Helicopter with Hinged Rotor Blades. TM 907, Sept. 1939.

- Helicopters Rotating Wing Aircraft (Cont.)
- Bailey, F. J., Jr.: A Simplified Theoretical Method of Determining the Characteristics of a Lifting Rotor in Forward Flight. Rept. 716, 1941.
- Tetervin, Neal: Tests in the NACA Two-Dimensional Low-Turbulence Tunnel of Airfoil Sections Designed to Have Small Pitching Moments and High Lift-Drag Ratios. CB 3I13 (WR L-452), Sept. 1943.
- Bailey, F. J., Jr. and Gustafson, F. B.: Charts for Estimation of the Characteristics of a Helicopter Rotor in Forward Flight. I - Profile Drag-Lift Ratio for Untwisted Rectangular Blades. ACR L4H07 (WR L-110), Sept. 1944.
- Tetervin, Neal: Airfoil Section Data from Tests of 10 Practical-Construction Sections of Helicopter Rotor Blades Submitted by the Sikorsky Aircraft Division, United Aircraft Corporation. MR (WR L-643), Sept. 1944.
- Kelley, Bartram: Response of Helicopter Rotors to Periodic Forces. ARR 5A09 (WR W-49), March 1945.
- Gustafson, F. B.: Flight Tests of the Sikorsky HNS-1 (Army YR-4B) Helicopter. I - Experimental Data on Level-Flight Performance with Original Rotor Blades. MR L5C10 (WR L-595), March 1945.
- Bailey, F. J., Jr. and Voglewede, T. J.: An
 Estimate of the Effect of Engine Supercharging on the Take-Off Thrust of a
 Typical Helicopter at Different Altitudes and Temperatures. TED No.
 NACA 1301. MR L5C12b (WR L-592),
 March 1945.
- Dingeldein, Richard C. and Schaefer, Raymond F.: High-Speed Photographs of a YR-4B Production Rotor Blade for Simulated Flight Conditions in the Langley Full-Scale Tunnel. MR L5C12c, March 1945.
- Gustafson, F. B. and Gessow, Alfred:
 Flight Tests of the Sikorsky HNS-1
 (Army YR-4B) Helicopter. II Hovering and Vertical-Flight Performance with the Original and an Alternate Set of Main-Rotor Blades, Including a Comparison with Hovering Performance Theory. MR L5D09a (WR L-596), April 1945.
- Migotsky, Eugene: Full-Scale-Tunnel Performance Tests of the PV-2 Helicopter Rotor TED No. NACA 239. MR L5C29a (WR L-545), April 1945.

- Coleman, Robert P.; Feingold, Arnold M. and Stempin, Carl W.: Evaluation of the Induced-Velocity Field of an Idealized Helicopter Rotor. ARR L5E10 (WR L-126), June 1945.
- Talkin, Herbert W.: Charts for Helicopter-Performance Estimation. ACR L5E04 (WR L-283), Aug. 1945.
- Duberg, John E. and Luecker, Arthur R.: Comparisons of Methods of Computing Bending Moments in Helicopter Rotor Blades in the Plane of Flapping. ARR L5E23 (WR L-9), Aug. 1945.
- Dingeldein, Richard C. and Schaefer, Raymond F.: Static-Thrust Tests of Six Rotor-Blade Designs on a Helicopter in the Langley Full-Scale Tunnel. ARR L5F25b (WR L-101), Sept. 1945.
- Gustafson, F. B. and Myers, G. C., Jr.: Stalling of Helicopter Blades. Rept. 840, 1946.
- Stivers, Louis S., Jr. and Rice, Fred J., Jr.:
 Aerodynamic Characteristics of Four
 NACA Airfoil Sections Designed for
 Helicopter Rotor Blades. RB L5K02
 (WR L-29), Feb. 1946.
- Gustafson, F. B. and Gessow, Alfred: Effect of Rotor-Tip Speed on Helicopter Hovering Performance and Maximum Forward Speed. ARR L6A16 (WR L-97), March 1946.
- Lipson, Stanley: Static-Thrust Investigation of Full-Scale PV-2 Helicopter Rotors Having NACA 0012.6 and 23012.6 Airfoil Sections. TED No. NACA 239. MR L6D24 (WR L-749), May 1946.
- Coleman, Robert P. and Feingold, Arnold M.: Theory of Ground Vibrations of a Two-Blade Helicopter Rotor on Anisotropic Flexible Supports. TN 1184, Jan. 1947.
- Talkin, Herbert W.: Charts Showing Relations Among Primary Aerodynamic Variables for Helicopter-Performance Estimation. TN 1192, Feb. 1947.
- Gustafson, F. B. and Gessow, Alfred: Effect of Blade Stalling on the Efficiency of a Helicopter Rotor as Measured in Flight. TN 1250, April 1947.
- Myers, Garry C., Jr.: Flight Measurements of Helicopter Blade Motion with a Comparison Between Theoretical and Experimental Results. TN 1266, April 1947.
- Gessow, Alfred and Myers, Garry C., Jr.: Flight Tests of a Helicopter in Autorotation, Including a Comparison with Theory. TN 1267, April 1947.

- Helicopters Rotating Wing Aircraft (Cont.)
- Dingeldein, Richard C. and Schaefer, Raymond F.: Full-Scale Investigation of a Typical Single-Rotor Helicopter in Forward Flight. TN 1289, May 1947.
- Gessow, Alfred: Effect of Rotor-Blade Twist and Plan-Form Taper on Helicopter Hovering Performance. TN 1542, Feb. 1948.
- Migotsky, Eugene: Full-Scale Investigation of the Blade Motion of the PV-2 Helicopter Rotor. TN 1521, March 1948.
- Gustafson, F. B. and Reeder, J. P.: Helicopter Stability. RM L7K04, April 1948.
- Gustafson, F. B. and Gessow: Analysis of Flight-Performance Measurements on a Twisted, Plywood-Covered Helicopter Rotor in Various Flight Conditions. TN 1595, June 1948.
- Gessow, Alfred: Standard Symbols for Helicopters. TN 1604, June 1948.
- Gessow, Alfred: Bibliography of NACA Papers on Rotating-Wing Aircraft, June 1948. RM L7J30, July 1948.
- Gessow, Alfred: Flight Investigation of Effects of Rotor-Blade Twist on Helicopter Performance in the High-Speed and Vertical-Autorotative-Descent Conditions. TN 1666, Aug. 1948.
- Reissner, H. and Morduchow, M.: A Theoretical Study of the Dynamic Properties of Helicopter-Blade Systems. TN 1430, Nov. 1948.
- Reeder, John P. and Gustafson, F. B.: On the Flying Qualities of Helicopters. TN 1799, Jan. 1949.
- Carpenter, Paul J. and Peitzer, Herbert E.: Response of a Helicopter Rotor to Oscillatory Pitch and Throttle Movements. TN 1888, June 1949.
- Nikolsky, A. A. and Seckel, Edward: An Analytical Study of the Steady Vertical Descent in Autorotation of Single-Rotor Helicopters. TN 1906, June 1949.
- Nikolsky, A. A. and Seckel, Edward: An Analysis of the Transition of a Helicopter from Hovering to Steady Autorotative Vertical Descent. TN 1907, June 1949.
- Schaefer, Raymond F.; Loftin, Laurence K., Jr. and Horton, Elmer A.: Two-Dimensional Investigation of Five Related NACA Airfoil Sections Designed for Rotating-Wing Aircraft. TN 1922, July 1949.

Reeder, John P. and Haig, Chester R., Jr.: Some Tests of the Longitudinal Stability and Control of an H-13B Helicopter in Forward Flight. RM L9E25a, Aug. 1949.

SEAPLANES

(1.7.4)

- Diehl, Walter S.: Tests on Airplane Fuselages, Floats and Hulls. Rept. 236, 1926.
- Verduzio, Rudolfo: Stresses Developed in Seaplanes While Taking Off and Landing. TM 677, July 1932.
- Darevsky, V. M.: Determination of the Stresses Produced by the Landing Impact in the Bulkheads of a Seaplane Bottom. TM 1055, Jan. 1944.
- Benson, James M. and Bidwell, Jerold M.: Bibliography and Review of Information Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept. 1945.

GENERAL STUDIES (1.7.4.1)

- Pegna, G.: High Efficiency of Seaplanes. TM 32, Aug. 1921.
- The 1926 German Seaplane Contest. Seewald, F.: Part I: Lessons Taught. Blenk, H. and Liebers, F.: Part II: Method of Rating. TM 454, March 1928.
- Kohler, M.: Aerodynamic Forces and Moments of a Seaplane on the Water. TM 728, Nov. 1933.
- Parkinson, J. B. and Bell, J. W.: The Calculated Effect of Trailing-Edge Flaps on the Take-Off of Flying Boats. TN 510, Nov. 1934.
- Olson, R. E. and Allison, J. M.: The Calculated Effect of Various Hydrodynamic Factors on the Take-Off of a Large Flying Boat. Rept. 702, 1940.
- Dawson, John R. and Walter, Robert C.:
 The Effects of Various Parameters on
 the Load at Which Spray Enters the
 Propellers of a Flying Boat. TN 1056,
 May 1946.
- Yates, Campbell C. and Riebe, John M.: Effect of Length-Beam Ratio on the Aerodynamic Characteristics of Flying-Boat Hulls. TN 1305, June 1947.
- Yates, Campbell C. and Riebe, John M.: Aerodynamic Characteristics of Three Planning-Tail Flying-Boat Hulls. TN 1306, June 1947.

- General Studies Seaplanes (Cont.)
- Riebe, John M. and Naeseth, Rodger L.: Effect of Aerodynamic Refinement on the Aerodynamic Characteristics of a Flying-Boat Hull. TN 1307, June 1947.
- Locke, F. W. S., Jr.: A Graphical Method for Interpolation of Hydrodynamic Characteristics of Specific Flying Boats from Collapsed Results of General Tests of Flying-Boat-Hull Models. TN 1259, Jan. 1948.
- Parkinson, John B.: Take-Off Performance of Light Twin-Float Seaplanes. TN 1524, Feb. 1948.
- Fullmer, Felicien F., Jr.: Wind-Tunnel Investigation of a Systematic Series of Modifications to a Flying-Boat Hull. TN 1576, May 1948.
- Lowry, John G. and Riebe, John M.: Effect of Length-Beam Ratio on Aerodynamic Characteristics of Flying-Boat Hulls Without Wing Interference. TN 1686, Sept. 1948.
- MacLeod, Richard G.: Aerodynamic Characteristics of a Flying-Boat Hull Having a Length-Beam Ratio of 15 and a Warped Forebody. RM L9A03, Feb. 1949.

SPECIFIC TYPES (1.7.4.2)

- Diehl, W. S.: F-5-L Boat Seaplane Comparative Performance with Direct Drive and Geared Engines. TN 116, Oct. 1922.
- The Vickers "Vendace." A Land or Sea Training Biplane. AC 3, May 1926.
- The Short S.7 "Mussel." A Training Seaplane with 65 HP. "Cirrus" Engine. AC 5, May 1926.
- The Blackburn "Sprat." A Training Airplane Convertible into Landplane or Seaplane. AC 11, July 1926.
- The Avro "Avian" Airplane. 65 HP. Armstrong-Siddeley "Genet" Engine. AC17, Oct. 1926.
- The Supermarine "Southampton" Seaplane. (Observation or Bomber). AC 25, Dec. 1926.
- The "Dornier Mercury" Commercial Airplane with B.M.W. VI 600 HP. Engine. AC 30, Feb. 1927.
- Dornier "Superwal" Commercial Seaplane. Two Rolls-Royce "Condor" 650 HP. Engines. AC 31, Feb. 1927.

- Macchi M.39 Seaplane. Single-Seat Racer with an 800 HP. Fiat "A-S2" Engine. AC 32, March 1927.
- "Savoia" Seaplane S.55. (Military or Commercial). AC 33, March 1927.
- Richard-Penhoet Commercial Seaplane. AC 35, March 1927.
- The Rohrbach "Robbe" RO VII Seaplane. (Military or Commercial). AC 36, April 1927.
- The Francois Villiers Marine Pursuit Airplane. AC 37, April 1927.
- Heinkel H.E.5 Commercial Seaplane. (Winner of the 1926 German Seaplane Contest at Warnemunde). AC 38, April 1927.
- Liore-Olivier Le0 194 Seaplane. AC 39, April 1927.
- "Meteore 63" Commercial Seaplane. AC 41, May 1927.
- "Levasseur 8" Transatlantic Airplane. AC 50, Aug. 1927.
- The 1926 German Seaplane Contest. Seewald, F.: Part I: Lessons Taught. Blenk, H. and Liebers, F.: Part II: Method of Rating. TM 454, March 1928.
- The Short "Calcutta" First British All-Metal Commercial Seaplane. AC 68, March 1928.
- The "Gloster IV" Seaplane (British). AC 69, March 1928.
- Savoia Marchetti "S 64" Airplane. AC 78, Aug. 1928.
- The Sikorsky Twin-Engined Amphibian Type S-38 Model 1928, AC 79, Aug. 1928.
- C.A.M.S. 54 G.R. Transatlantic Seaplane (French). AC 80, Sept. 1928.
- The Saunders "Cutty Sark" Commercial Seaplane (British). A High-Wing Monoplane Flying Boat. AC 105, Nov. 1929.
- The Dornier "Do. X" Flying Boat (German).
 A Giant High-Wing Monoplane. AC
 109, Feb. 1930.
- The Liore-Olivier "Le 0.240" Commercial Seaplane (French). A High-Wing Cantilever Monoplane. AC 110, Feb. 1930.
- The Short "Valetta" Commercial Seaplane (British). A High-Wing All-Metal Twin-Float Monoplane. AC 125, Aug. 1930.

Specific Types - Seaplanes (Cont.)

- Latecoere 38-0 Flying Boat (French). A Long-Range Sesquiplane for Carrying Mail. AC 136, Feb. 1931.
- Leglise, Pierre: The Bernard 120 Seaplane (French). A 1400 hp Single-Seat Monoplane Racer. AC 139, March 1931.
- The C.A.M.S. 60 Seaplane (French)-A Twin-Engine Bombing and Torpedo Monoplane. AC 141, April 1931.
- The C.A.M.S. 80 Amphibian (French)-An Observation Monoplane. AC 158, March 1932.
- The Latécoère 501 Commercial Seaplane (French)-A Three-Engine Metal Sesquiplane. AC 170, Sept. 1932.
- The Short "Scion Senior" Commercial Airplane (British)-A Four-Engine High-Wing Cantilever Monoplane. AC 200, Feb. 1936.
- The Latécoère 521 "Lieutenant De Vaisseau Paris" Commercial Flying Boat (French)-A Two-Deck Six-Engine Semicantilever Sesquiplane. AC 202, March 1936.
- The Vickers-Supermarine "Scapa" (British)-A Military Flying Boat. AC 203, May 1936.
- The Short "Empire" Commercial Flying Boat (British)-An All-Metal Cantilever Monoplane. AC 204, Dec. 1936.
- Parkinson, John B. and Olson, Roland E.: Tank Tests of a 1/5 Full-Size Dynamically Similar Model of the Army OA-9 Amphibian with Motor-Driven Propellers - NACA Model 117. ARR (WR L-475), Dec. 1941.
- Land, Norman S.: Effect of Powered Propellers on the Aerodynamic Characteristics and the Porpoising Stability of a Dynamic Model of a Long-Range Flying Boat. RB 3E13 (WR L-235), May 1943.
- Jarvis, George A. and Steiner, Margaret F.: Ditching Tests with a 1/10-Size Model of the Army A-20A Airplane in Langley Tank No. 2 and on an Outdoor Catapult. MR L4K29a (WR L-618), Nov. 1944.
- King, Douglas A. and Mas, Newton A.: Effects on Low-Speed Spray Characteristics of Various Modifications to a Powered Model of the Boeing XPBB-1 Flying Boat. ACR L5F07 (WR L-162), June 1945.

AIRSHIPS

(1.7.5)

- The Stretching of the Fabric and the Deformation of the Envelope in Non-Rigid Balloons. Haas, Rudolf: I The Stretching of the Fabric and the Shape of the Envelope. Dietzius, Alexander: II The Deformation of the Envelope of the Siemens-Schuckert Airship. Rept. 16, 1917.
- Subcom. on Standardization and Investigation of Materials: Fabrics for Aeronautic Construction, Part II Balloon Fabrics. Rept. 22 (Pt. II), 1917.
- Munk, Max M.: The Drag of Zeppelin Airships. Rept. 117, 1921.
- Zahm, A. F.; Smith, R. H. and Hill, G. C.: The Drag of C Class Airship Hull with Varying Length of Cylindric Midships. Rept. 138, 1921.
- Volterra, Vito Prof.: Observations on the Method of Determining the Velocity of Airships. TM 24, June 1921.
- Nobile, Umberto: The Employment of Airships for the Transport of Passengers. Indications on the Maximum Limits of Their Useful Load, Distance Covered, Altitude and Speed. TN 63, Aug. 1921.
- Crocco, G. Arturo: The Dead Weight of the Airship and the Number of Passengers That Can Be Carried. TN 80, Jan. 1922.
- Herrera, Emilio: The R-38 Catastrophe and the Mechanics of Rigid Airship Construction. TM 105, June 1922.
- Warner, Edward P.: The Future of the Airship. TM 121, July 1922.
- Kapteyn, A.: Principle of the Boerner Airship. TM 154, Nov. 1922.
- Stapfer, Lt.: Comparison of Nonrigid and Semirigid Airships. TM 163, Nov. 1922.
- Causes of Failure of Airship Sheds. .
 Sonntag, R.: I. Collapse of Airship
 Shed A in Niedergorsdorf. Hoff, W.,
 Dr.: II. Suction Effects of Wind on
 Roof of Airship Shed "Nord in Staaken.
 TM 171, Nov. 1922.
- Chollet, L.: Balloon Fabrics Made of Goldbeater's Skins. TM 172, Dec. 1922.
- Bateman, H.: The Inertia Coefficients of an Airship in a Frictionless Fluid. Rept. 164, 1923.

- Airships (Cont.)
- Crocco, G. Arturo: Use of Helium in Airships. TM 208, June 1923.
- Crocco, G. A.: Replacing the Weight of Materials Consumed on Airships. TM 211, June 1923.
- Sherz, Walter: Possibility of Profitable Air Traffic Between Lisbon and Rio De Janeiro. TM 236, Nov. 1923.
- Stahl, Friedrich: Rigid Airships. TM 237, Nov. 1923.
- Munk, Max M.: The Aerodynamic Forces on Airship Hulls. Rept. 184, 1924.
- Burgess, C. P.: Forces on Airships in Gusts. Rept. 204, 1924.
- Lemaire, Lieut.: Voyage of the "Dixmude" over Northern Africa. TM 253, March 1924.
- Eckener, Hugo: Loss of the Dixmude. TM 256, April 1924.
- Crocco, G. A.: Structural and Economic Limits to the Dimensions of Airships. TM 274, Aug. 1924.
- Naatz, H.: Recent Researches in Airship Construction - I. Forces of Flow on a Moving Airship and the Effect of the Control Surfaces. TM 275, Aug. 1924.
- Naatz, H.: Recent Researches in Airship Construction - II. Bending Stresses on an Airship in Flight. TM 276, Aug. 1924.
- Naatz, H.: Recent Researches in Airship Construction - III. A New Type of Nonrigid Airship. TM 277, Sept. 1924.
- Rizzo, Frank: A Study of Static Stability of Airships. TN 204, Sept. 1924.
- Crocco, G. A.: Effect of Ratio Between Volume and Surface Area of Airships. TM 280, Sept. 1924.
- Crocco, G. A.: Mooring Airships. TM 283, Oct. 1924.
- Verduzio, R.: Calculation of the Hull and of the Car-Suspension Systems of Airships. TM 285, Oct. 1924.
- Dürr, L.: The American Airship ZR-3. TM 286, Nov. 1924.
- Tuckerman, L.B.: Inertia Factors of Ellipsoids for Use in Airship Design. Rept. 210, 1925.
- Bleistein, W.: Effect of Speed on Economy of Airship Traffic. TM 302, Feb. 1925.

- Poeschel, Professor: Suggestions for Courses of Instruction in Aviation. TM 304, March 1925.
- Nobile, Umberto: Altitude of Equilibrium of an Airship. TM 306, March 1925.
- Zahm, A. F.; Smith, R. H. and Louden, F. A.: Air Forces, Moments and Damping on Model of Fleet Airship Shenandoah. Rept. 215, Sept. 1925.
- Freyssinet: Concrete Airship Sheds at Orly, France. Part I - General Aspect of the Problem. Basic Principles of the Final Project. Principal Structural Elements. TM 332, Oct. 1925.
- Freyssinet: Concrete Airship Sheds at Orly, France. Part II Supporting Structure and Method of Moving. Mechanism for Moving the Centering. Apparatus for Handling the Materials. Remarks on Construction Details. TM 333, Oct. 1925.
- Weiss, Georg: Schütte-Lanz Airship Projects After the War. TM 335, Oct. 1925.
- Crowley, J. W., Jr. and DeFrance, S. J.: Pressure Distribution on the C-7 Airship. Rept. 223, 1926.
- Havill, Clinton H.: The Drag of Airships. TN 247, Sept. 1926.
- Havill, Clinton H.: The Drag of Airships. II - Drag of Bare Hulls. TN 248, Oct. 1926.
- Higgins, George J.: Tests of the N.P.L. Airship Models in the Variable Density Wind Tunnel. TN 264, Sept. 1927.
- Zahm, A. F.; Smith, R. H. and Louden, F. A.: Drag of C-Class Airship Hulls of Various Fineness Ratios. Rept. 291, 1928.
- DeFrance, S. J. and Burgess, C. P.: Speed and Deceleration Trials of U.S.S. Los Angeles. Rept. 318, 1928.
- DeFrance, S. J.: Flight Tests on U. S. S. "Los Angeles" Part I Full-Scale Pressure Distribution Investigation. Rept. 324, 1928.
- Burgess, C. P.: Flight Tests on U. S. S. "Los Angeles" Part II Stress and Strength Determination. Rept. 325, 1929.
- Thompson, F. L.: Full-Scale Turning Characteristics of the U. S. S. Los Angeles. Rept. 333, 1929.

Airships (Cont.)

- Krell, O.: Contribution to the Technique of Landing Large Airships. Part I -From Zeitschrift für Flugtechnik und Mortorluftschiffahrt September 28, 1928. TM 512, May 1929.
- Krell, O.: Contribution to the Technique of Landing Large Airships. Part II. TM 513, May 1929.
- Von Kármán, Théodor: Calculation of Pressure Distribution on Airship Hulls. TM 574, July 1930.
- Abbott, Ira H.: Airship Model Tests in the Variable Density Wind Tunnel. Rept. 394, 1931.
- Thompson, F. L. and Kirschbaum, H. W.: The Drag Characteristics of Several Airships Determined by Deceleration Tests. Rept. 397, 1931.
- Upson, Ralph H. and Klikoff, W. A.: Application of Practical Hydrodynamics to Airship Design. Rept. 405, 1931.
- Freeman, Hugh B.: Measurements of Flow in the Boundary Layer of a 1/40-Scale Model of the U. S. Airship "Akron." Rept. 430, 1932.
- Freeman, Hugh B.: Force Measurements on a 1/40-Scale Model of the U. S. Airship Akron. Rept. 432, 1932.
- Freeman, Hugh B.: Pressure-Distribution Measurements on the Hull and Fins of a 1/40-Scale Model of the U. S. Airship "Akron." Rept. 443, 1932.
- Silverstein, Abe and Gulick, B. G.: Ground-Handling Forces on a 1/40-Scale Model of the U. S. Airship "Akron". Rept. 566, 1936.
- Thompson, F. L.: Procedure for Determining Speed and Climbing Performance of Airships. TN 564, April 1936.
- McHugh, James G.: Pressure-Distribution Measurements at Large Angles of Pitch on Fins of Different Span-Chord Ratio on a 1/40-Scale Model of the U.S. Airship "Akron". Rept. 604, 1937.
- Ebner, Hans: The Present Status of Airship Construction, Especially of Airship-Framing Construction. TM 872, July 1938.
- Hillendahl, Wesley H.: A Flight Investigation of the Ice-Prevention Requirements of the United States Naval K-Type Airship. MR A5J19a (WR A-4), Oct. 1945.

BIPLANES AND TRIPLANES

(1.7.6)

- Prandtl, L.: Theory of Lifting Surfaces. Part II. TN 10, Aug. 1920.
- Norton, F. H.: The Effect of Staggering a Biplane. TN 70, Sept. 1921.
- The Aeronautics Staff, Construction Department, Navy Yard, Washington, D.C.: Air Force and Three Moments for F-5-L Seaplane. TN 85, Feb. 1922.
- Norton, F. H. and Carroll, T.: The Vertical Longitudinal, and Lateral Accelerations Experienced by an S.E. 5A Airplane While Maneuvering. Rept. 163, 1923.
- Toussaint, A.: Lecture on Aerodynamics. TM 227, Sept. 1923.
- Warner, Edward P.: Monoplanes or Biplanes. TM 238, Nov. 1923.
- Robert, Lt. Col.: Methods of Experimentation with Models and Utilization of Results. TM 247, Feb. 1924.
- Wieselsberger, C.: Triplane Tests. TN 178, Feb. 1924.
- Prandtl, L.: Induced Drag of Multiplanes. TN 182, March 1924.
- Munk, Max M. and Diehl, Walter S.: The Air Forces on a Model of the Sperry Messenger Airplane Without Propeller. Rept. 225, 1925.
- Fairbanks, A. J.: Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. Rept. 254, 1927.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Fairbanks, A. J.: Pressure Distribution Tests on PW-9 Wing Models Showing Effects of Biplane Interference. Rept. 271, 1927.
- Prandtl, L.: Effect of Streamline Curvature on Lift of Biplanes. TM 416, June 1927.
- Seiferth, R.: Investigation of a Wing with an Auxiliary Upper Part. TM 418, June 1927.
- Preston, H. E.: "Gloster" High Lift Biplane Wings. TM 442, Dec. 1927.

- Biplanes and Triplanes (Cont.)
- Shoemaker, James M.: Preliminary Biplane Tests in the Variable Density Wind Tunnel. TN 289, June 1928.
- Wenzinger, Carl J. and Harris, Thomas A.: Wind Tunnel Force Tests in Wing Systems Through Large Angles of Attack. TN 294, Aug. 1928.
- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models. I - Effects of Changes in Stagger and Gap. TN 310, July 1929.
- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models. II - Effects of Changes in Decalage, Dihedral, Sweepback and Overhang. TN 325, Oct. 1929.
- Knight, Montgomery and Noyes, Richard W.: Wind Tunnel Pressure Distribution Tests on a Series of Biplane Wing Models III Effects of Changes in Various Combinations of Stagger, Gap, Sweepback, and Decalage. TN 330, Dec. 1929.
- Ridley, Kenneth F.: An Investigation of Airplane Landing Speeds. TN 349, Sept. 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Square Wing Tip on a Biplane in Flight. TN 360, Jan. 1931.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Semicircular Wing Tip on a Biplane in Flight. TN 379, May 1931.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Modified Elliptical Wing Tip on a Biplane in Flight. TN 387, Aug. 1931.

- Noyes, Richard W.: Pressure Distribution Tests on a Series of Clark Y Biplane Cellules with Special Reference to Stability. Rept. 417, 1932.
- Rhode, Richard V.: The Pressure Distribution over a Standard and a Modified Navy Elliptical Wing Tip on a Biplane in Flight. TN 433, Oct. 1932.
- Rhode, Richard V.: The Pressure Distribution over a Long Elliptical Wing Tip on a Biplane in Flight. TN 437, Dec. 1932.
- Valentine, E. Floyd: Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. V-Clark Y Biplane Cellule NACA Cowled Nacelle-Tractor Propeller. Rept. 506, 1934.
- Wood, Donald H. and Bioletti, Carlton: Test of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. VI - Wings and Nacelles with Pusher Propeller. Rept. 507, 1934.
- Scudder, N. F.: The Forces and Moments Acting on Parts of the XN2Y-1 Airplane During Spins. Rept. 559, 1936.
- Pearson, H. A.: Pressure-Distribution Measurements on an 0-2H Airplane in Flight. Rept. 590, 1937.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Kuchemann, D.: Investigation of the Lift Distribution over the Separate Wings of a Biplane. TM 889, March 1939.
- Donely, Philip and Shufflebarger, C. C.: Tests in the Gust Tunnel of a Model of the XBM-1 Airplane. TN 731, Oct. 1939.

Stability and Control

(1.8)

- Constantin, Louis: New Lateral Stabilizing Device for Airplanes. TM 179, Jan. 1921.
- Carleman, M. T.: Differential Equations in Airplane Mechanics. TM 67, March 1922.
- Warner, Edward P.: Stability of Airplanes. TM 92, May 1922.
- Toussaint, A.: Lecture on Aerodynamics. TM 227, Sept. 1923.
- Kann, Heinrich: Airplanes in Horizontal Curvilinear Flight. TN 174, Jan. 1924.
- Salkowski, E.: Curvilinear Flight of Airplanes. TN 176, Jan. 1924.
- Nobile, Umberto: Altitude of Equilibrium of an Airship. TM 306, March 1925.
- Scherberg, Max and Rhode, R. V.: Mass Distribution and Performance of Free Flight Models. TN 268, Oct. 1927.
- Gradenwitz, Alfred: Device for the Automatic Control of Airplanes. TM 495, Jan. 1929.
- Boykow, H.: Mechanical Control of Airplanes. TM 504, March 1929.
- Biche, Jean: Problems Concerning the Stability and Maneuverability of Airplanes. TM 663, March 1932.
- Lademann, Robert W. E.: Development of Tailless and All-Wing Gliders and Airplanes. TM 666, April 1932.
- Haus, Fr.: Automatic Stability of Airplanes. TM 695, Dec. 1932.
- Hubner, Walter: Results of Extended Tests of the Focke-Wulf F 19a "Ente," A Tail-First Airplane. TM 721, Sept. 1933.
- Von Köppen, Joachim: Trend of Airplane Flight Characteristics. TM 731, Dec. 1933.
- Haus, Fr.: Automatic Stabilization. TM 815, Dec. 1936.
- Pearson, Henry A. and Jones, Robert T.: Theoretical Stability and Control Characteristics of Wings with Various Amounts of Taper and Twist. Rept. 635, 1938.

- Weiss, Herbert K.: Theory of Automatic Control of Airplanes. TN 700, April 1939.
- Rautenberg, H. J.: General Relationships Between the Various Systems of Reference Axes Employed in Flight Mechanics. TM 958, Nov. 1940.
- Shortal, Joseph A. and Osterhout, Clayton J.: Preliminary Stability and Control Tests in the NACA Free-Flight Wind Tunnel and Correlation with Full-Scale Flight Tests. TN 810, June 1941.
- Driggs, I. H.: Analytical Determination of Control System Pulley-Axis Angles. TN 827, Sept. 1941.
- Ribner, Herbert S.: Proposal for a Propeller Side-Force Factor. RB 3L02 (WR L-336), Dec. 1943.
- Pearson, E. O., Jr.: Aerodynamic Tests of an AN-M-65-Azon 1000-Pound Radio-Controlled Bomb in the LMAL 16-Foot High-Speed Tunnel. MR (WR L-131), June 1944.
- Kayten, Gerald G.: Analysis of Wind-Tunnel Stability and Control Tests in Terms of Flying Qualities of Full-Scale Airplanes. Rept. 825, 1945.
- Watkins, Charles E.: Paths of Target-Seeking Missiles in Two Dimensions. ACR L6B06 (WR L-735), July 1946.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a 35° Sweptback Wing with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1511, Jan. 1948.

STABILITY

(1.8.1)

- Green, M. W.: Measurement of the Moments of Inertia of Full Scale Airplanes. TN 265, Sept. 1927.
- Miller, Marvel P. and Soulé, Hartley A.: Moments of Inertia of Several Airplanes. TN 375, May 1931.
- Schmidt, Wilhelm: Development of a Non-Autorotative Airplane Capable of Steep Landing. TM 650, Dec. 1931.

- Misztal, Franz: The Problem of the Propeller in Yaw with Special Reference to Airplane Stability. TM 696, Jan. 1933.
- De Lajarte, A. Dufaure: Chief Characteristics and Advantages of Tailless Airplanes. TM 794, May 1936.
- Kirschbaum, H. W.: Estimation of Moments of Inertia of Airplanes from Design Data. TN 575, July 1936.
- Stuper, J.: Effect of Propeller Slipstream of Wing and Tail. TM 874, Aug. 1938.
- Donely, Philip and Shufflebarger, C. C.: Tests in the Gust Tunnel of a Model of the XBM-1 Airplane. TN 731, Oct. 1939.
- Gracey, William: Measured Moments of Inertia of 32 Airplanes. TN 780, Oct. 1940.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- Ribner, Herbert S.: Propellers in Yaw. Rept. 820, 1945.
- Crane, Harold L. and Sjoberg, Sigurd A.:
 Comparison of Predicted and Actual
 Control-Fixed Stability and Control
 Characteristics of a Douglas A-26B
 Airplane. MR L5D06 (WR L-608),
 April 1945.
- Scher, Stanley H. and Gale, Lawrence J.:
 Wind-Tunnel Investigation of the Opening Characteristics, Drag, and Stability of Several Hemispherical Parachutes.
 TN 1869, April 1949.

STATIC (1.8.1.1)

- Klemin, Alexander; Warner, Edward P. and Denkinger, George M.: An Investigation of the Elements Which Contribute to Statical and Dynamical Stability, and of the Effects of Variation in Those Elements. Rept. 17, 1917.
- Norton, F. H. and Allen, E. T.: Control in Circling Flight. Rept. 112, 1921.
- The Aeronautics Staff, Construction Department, Navy Yard, Washington, D. C.: Air Force and Three Moments for F-5-L Seaplane. TN 85, Feb. 1922.
- Etévé, Albert: Longitudinal Balancing of Airplanes. TM 190, Feb. 1923.
- Upson, Ralph H. and Klikoff, W. A.: Application of Practical Hydrodynamics to Airship Design. Rept. 405, 1931.

- McHugh, James G.: Pressure-Distribution Measurements at Large Angles of Pitch on Fins of Different Span-Chord Ratio on a 1/40-Scale Model of the U.S. Airship "Akron." Rept. 604, 1937.
- Hoerner, Sighard: Forces and Moments on a Yawed Airfoil. TM 906, Aug. 1939.
- Greenberg, Harry: Comparison of Vee-Type and Conventional Tail Surfaces in Combination with Fuselage and Wing in the Variable-Density Tunnel. TN 815, July 1941.
- Jones, Robert T.: Notes on the Stability and Control of Tailless Airplanes. TN 837, Dec. 1941.
- Recant, Isidore G. and Swanson, Robert S.: Determination of the Stability and Control Characteristics of Airplanes from Tests of Powered Models. ARR (WR L-710), July 1942.
- Donlan, C. J. and Letko, W.: The Effect of Cowling Shape on the Stability Characteristics of an Airplane. Sept. 1942.
- Goett, Harry J.; Jackson, Roy P. and Belsley, Steven E.: Wind-Tunnel Procedure for Determination of Critical Stability and Control Characteristics of Airplanes. Rept. 781, 1944.
- Phillips, William H.: Application of Spring Tabs to Elevator Controls. Rept. 797, 1944.
- Davis, Wallace F. and Brown, Sherwood H.: Wind-Tunnel Investigation of the Effect of Jet-Motor Operation on Stability. MR (WR A-31), July 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- Spreiter, John R. and Nissen, James N.:
 Flight Tests of a Pursuit Airplane
 Fitted with an Experimental BellowsType Bob Weight. MR (WR A-6), Oct.
 1944.
- Weiberg, James A. and Schnurbusch, Alfred W.: Flying Qualities of a Bomber Airplane with Engines in the Fuselage as Estimated from Tests of a 1/8-Scale Powered Model. MR A4K04 (WR A-78), Nov. 1944.
- Wong, Park Y.: The Effect of Skis on the Power-Off Stability and Control Characteristics of a Twin-Engine Cargo Airplane. MR A5F18 (WR A-74), June 1945.

- Static Stability (Cont.)
- Stevens, Victor I., Jr.; McCullough, George B. and Hanson, Frederick H.: An Experimental Investigation of the Effect of Propellers Used as Aerodynamic Brakes on Stability and Control. ARR 5C01 (WR A-19), July 1945.
- Weiberg, James A. and Schnurbusch, Alfred W.: Aerodynamic Characteristics of a 1/8-Scale Powered Model of a Bomber Airplane with Engines in the Fuselage. MR A5J12 (WR A-89), Oct. 1945.
- Malvestuto, Frank S., Jr. and Gale, Lawrence J.: Formulas for Additional Mass Corrections to the Moments of Inertia of Airplanes. TN 1187, Feb. 1947.
- Lange/Wacke: Test Report on Measurements on a Series of Tapered Wings of Small Aspect Ratio. (Trapezoidal Wing with Fuselage). TM 1129, July 1947.
- Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.
- Lange/Wacke: Test Report on Three- and Six-Component Measurements on a Series of Tapered Wings of Small Aspect Ratio. (Partial Report: Triangular Wing). TM 1176, May 1948.
- Hoggard, H. Page, Jr. and Hagermann, John R.: Downwash and Wake Behind Untapered Wings of Various Aspect Ratios and Angles of Sweep. TN 1703, Oct. 1948.
- Longitudinal Static Stability (1.8.1.1.1)
- Warner, Edward P.: Statical Longitudinal Stability of Airplanes. Rept. 96, 1920.
- Warner, Edward P.: Notes on Longitudinal Stability and Balance. TN 1, April 1920.
- Bacon, D. L.: Preliminary Experiments to Determine Scale and Slipstream Effects on a 1/24th Size Model of a JN4H Biplane. Rept. 122, 1921.
- Munk, Max: The Caproni Seaplane. TN 57, July 1921.
- Munk, Max A.: The Tail Plane. Rept. 133, 1922.
- Rizzo, Frank: A Study of Static Stability of Airships. TN 204, Sept. 1924.
- Diehl, Walter S.: Tests on Airplane Fuselages, Floats and Hulls. Rept. 236, 1926.

- Montieth, Charles N.: Slipstream Effect. TM 355, March 1926.
- Bienen, Theodor: Approximate Calculation of the Static Longitudinal Stability of Airplanes. TM 387, Nov. 1926.
- Reid, Elliott G.: A Full-Scale Investigation of Ground Effect. Rept. 265, 1927.
- Lippisch, A.: Approximation Method for Determining the Static Stability of a Monoplane Glider. TM 436, Nov. 1927.
- Diehl, Walter S.: Two Practical Methods for the Calculation of the Horizontal Tail Area Necessary for a Statically Stable Airplane. Rept. 293, 1928.
- Dronin, Paul V.; Ramsden, Earl I. and Georg Higgins: The Effect of Tip Shields on a Horizontal Tail Surface. TN 295, Aug. 1928.
- Muller, Horst: The Balance of Moments and the Static Longitudinal Stability of Airplanes. TM 545, Dec. 1929.
- Blenk, Hermann: Flight Tests for the Determination of Static Longitudinal Stability. TM 584, Sept. 1930.
- Abbott, Ira H.: Airship Model Tests in the Variable Density Wind Tunnel. Rept. 394, 1931.
- Kiel, Heinrich Georg: Static Longitudinal Stability of "Ente" Airplanes. TM 612, March 1931.
- Topfer, Carl: Lift Distribution and Longitudinal Stability of an Airplane. TM 641, Oct. 1931.
- Zimmerman, C. H.: Characteristics of Clark Y Airfoils of Small Aspect Ratios. Rept. 431, 1932.
- Hubner, Walter: The Effect of a Gap Between Elevator and Stabilizer on the Static Stability and Maneuverability about the Lateral Axis in Flight. TM 701, March 1933.
- Hubner, Walter: Flight-Test Data on the Static Fore-and-Aft Stability of Various German Airplanes. TM 708, May 1933.
- Biechteler, Curt: Influence of Cut-Outs in Elevator on the Static Longitudinal Stability and on the Static Elevator Effect. TM 750, Aug. 1934.
- Hubner, Walter: Additional Test Data on Static Longitudinal Stability. TM 752, Aug. 1934.

- Longitudinal Static Stability (Cont.)
- Higgins, George J.: A Study of the Pitching Moments and the Stability Characteristics of Monoplanes. TN 511, Nov. 1934.
- Le Sueur, Maurice: Ground Effect on the Take-Off and Landing of Airplanes. TM 771, July 1935.
- Lotz, Irmgard: Correction of Downwash in Wind Tunnels of Circular and Elliptic Sections. TM 801, July 1936.
- Soulé, Hartley A.: Notes on the Calculation of the Minimum Horizontal Tail Surface for Airplanes Equipped with Wing Flaps. TN 597, April 1937.
- Reed, Warren D. and Clay, William C.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with External-Airfoil Flaps. TN 604, July 1937.
- Soulé, Hartley A. and Gough, Melvin N.: Some Aspects of the Stalling of Modern Low-Wing Monoplanes. TN 645, April 1938.
- Muttray, H.: Investigations on the Downwash Behind a Tapered Wing with Fuselage and Propeller. TM 876, Sept. 1938.
- Schrenk, M.: Static Longitudinal Stability and Longitudinal Control of Autogiro Rotors. TM 879, Oct. 1938.
- Katzoff, S.: Longitudinal Stability and Control with Special Reference to Slipstream Effects. Rept. 690, 1940.
- Wetmore, J. W. and Turner, L. I., Jr.: Determination of Ground Effect from Tests of a Glider in Towed Flight. Rept. 695, 1940.
- Donely, Philip and Shufflebarger, C. C.: Tests of a Gust-Alleviating Flap in the Gust Tunnel. TN 745, Jan. 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Martinov, A. and Kolosoz, E.: Some Data on the Static Longitudinal Stability and Control of Airplanes (Design of Control Surfaces). TM 941, May 1940.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Fuselage Stability in Yaw with Various Arrangements of Fins. TN 785, Nov. 1940.

- Gilruth, R. R. and White, M. D.: Analysis and Prediction of Longitudinal Stability of Airplanes. Rept. 711, 1941.
- Rogallo, Francis M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Plain and Slot-Lip Aileron on a Wing with a Full-Span Slotted Flap. ACR (WR L-375), April 1941.
- Lowry, John G.: Power-Off Wind-Tunnel Tests of the 1/8-Scale Model of the Brewster F2A Airplane. MR (WR L-543), June 1941.
- Lowry, John G.: Power-On Wind-Tunnel Tests of the 1/8-Scale Model of the Brewster F2A Airplane with Full-Span Slotted Flaps. MR (WR L-707), Aug. 1941.
- Recant, I. G.: Plate Method of Ground Representation for Wind-Tunnel Determination of Elevator Effectiveness in Landing. TN 823, Sept. 1941.
- Diehl, Walter S.: The Mean Aerodynamic Chord and the Aerodynamic Center of a Tapered Wing. Rept. 751, 1942.
- Lowry, John G. and Toll, Thomas A.:

 Power-On Longitudinal-Stability and
 Control Tests of the 1/8-Scale Model
 of the Brewster F2A Airplane Equipped
 with Full-Span Slotted Flaps and a
 New Horizontal Tail. MR (WR L-709),
 March 1942.
- Phillips, William H.: Effect of Spring and Gravity Moments in the Control System on the Longitudinal Stability of the Brewster XSBA-1 Airplane. ARR (WR L-263), April 1942.
- Delany, Noel K.: Effects of Direction of Propeller Rotation on the Longitudinal Stability of the 1/10-Scale Model of the North American XB-28 Airplane with Flaps Neutral. ACR, June 1942.
- Runckel, Jack F.: The Effect of Pitch on Force and Moment Characteristics of Full-Scale Propellers of Five Solidities. ARR (WR L-446), June 1942.
- Eujen, E.: Prediction of Downwash and Dynamic Pressure at the Tail from Free-Flight Measurements. TM 1021, July 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of an NACA Full-Span High-Lift Lateral-Control Combination. I - Section Characteristics, NACA 23012 Airfoil. ARR (WR L-288), July 1942.

Longitudinal Static Stability (Cont.)

- Goranson, R. Fabian: Calculated Effects of Full-Span Slotted and Fowler Flaps on Longitudinal Stability and Control Characteristics for a Typical Fighter-Type Airplane with Various Tail Modifications. ARR (WR L-392), July 1942.
- Pass, H. R.: Wind-Tunnel Study of the Effects of Propeller Operation and Flap Deflection on the Pitching Moments and Elevator Hinge Moments of a Single-Engine Pursuit-Type Airplane. ARR (WR L-411), July 1942.
- Sweberg, Harold H.: The Effect of Propeller Operation on the Air Flow in the Region of the Tail Plane for a Twin-Engine Tractor Monoplane. ARR (WR L-381), Aug. 1942.
- Recant, I. G. and Wallace, A. R.: Effect of Ground on Characteristics of a Model of a Low-Wing Airplane with Full-Span Slotted Flap with and Without Power. ARR (WR L-335), Sept. 1942.
- Erickson, Albert L.: Investigation of Diving Moments of a Pursuit Airplane in the 16-Foot Wind Tunnel at Ames Aeronautical Laboratory. MR (WR A-65), Oct. 1942.
- Graham, Robert R. and Ashworth, C. Dixon: Tests in the 19-Foot Pressure Tunnel of a 1/2.75-Scale Model of the F4U-1 Airplane with Several Balanced Elevators Full-Span Flaps, and Dropable Gas Tank. ACR (WR L-440), Oct. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Donlan, Charles J.: Some Theoretical Considerations of Longitudinal Stability in Power-On Flight with Special Reference to Wind-Tunnel Testing. ARR (WR L-309), Nov. 1942.
- Ganzer, Victor M.: High-Speed Wind-Tunnel Tests of a 1/6-Scale Model of a Twin-Engine Pursuit Airplane. MR (WR A-91), Dec. 1942.
- Hood, Manley J. and Allen H. Julian: The Problem of Longitudinal Stability and Control at High Speeds. Rept. 767, 1943.
- Biebel, William J.: Full-Scale Tunnel Tests of a Flying Model of the Curtiss XP-55 Airplane. MR (WR L-627), Jan. 1943.

- Sweberg, Harold H.: Stability and Control Tests of a 3/4-Scale Model of the XP-69 Airplane in the NACA Full-Scale Tunnel. MR (WR L-642), Jan. 1943.
- Campbell, John P. and Hollingworth,
 Thomas A.: The Effect on Stability
 and Control of a Pusher Propeller Behind Conventional Tail Surfaces as
 Determined by Tests of a Powered
 Model in the Free-Flight Tunnel.
 ACR (WR L-220), Jan. 1943.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Tests of a Twin-Engine Model to Determine the Effect of Direction of Propeller Rotation on the Static-Stability Characteristics. ARR (WR L-295), Jan. 1943.
- Belsley, Steven E. and Jackson, Roy P.: The Effect of Amphibious Floats on the Power-Off Stability and Control Characteristics of a Twin-Engine Cargo Airplane. MR (WR A-73), Jan. 1943.
- Hamilton, William T.: High-Speed Wind-Tunnel Tests of a 1/14-Scale Model of a Four Engine Transport Airplane. MR (WR A-69), Feb. 1943.
- Laitone, Edmund V.: Investigation of the Longitudinal Stability at High Speeds of a Northrop XP-56 1/5-Scale Model. MR (WR A-77), March 1943.
- Schuldenfrei, Marvin: Some Notes on the Determination of the Stick-Fixed Neutral Point from Wind-Tunnel Data. RB 3I20 (WR L-344), Sept. 1943.
- Stevens, Victor I., Jr. and McCullough, George B.: Flying Qualities of the PV-1 as Estimated from Wind-Tunnel Tests. MR (WR A-93), Oct. 1943.
- Recant, I. G. and Wallace, A. R.: Effect of Single- and Dual-Rotating Propellers on Longitudinal Stability Characteristics of a 1/9-Scale Model of XP-62 Airplane with Flaps Retracted. ACR 3J29, Oct. 1943.
- Spahr, J. Richard and Christopherson, Don R.: Measurements in Flight of the Lateral-Control Characteristics of an Airplane Equipped with Full-Span Zap Flaps and Simple Circular-Arc-Type Ailerons. MR (WA A-28), Dec. 1943.
- Goett, Harry J. and Delany, Noel K.: Effect of Tilt of the Propeller Axis on the Longitudinal-Stability Characteristics of Single-Engine Airplanes. Rept. 774, 1944.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.

- Longitudinal Static Stability (Cont.)
- Jones, Robert T. and Greenberg, Harry: Effect of Hinge-Moment Parameters on Elevator Stick Forces in Rapid Maneuvers. Rept. 798, 1944.
- Brewer, Gerald W.: Tests of the Northrop MX-334 Glider Airplane in the NACA Full-Scale Tunnel. MR (WR L-628), Jan. 1944.
- Barnes, Robert H.: High-Speed Aerodynamic Characteristics of a Four-Engine Bomber Airplane as Determined from Tests of an 0.075-Scale Model. MR (WR A-82), Jan. 1944.
- Ganzer, Victor M.: The Effects of a Highly Cambered Low-Drag Wing and of Auxiliary Flaps on the High-Speed Aerodynamic Characteristics of a Twin-Engine Pursuit Airplane Model. MR (WR A-90), Feb. 1944.
- Schuldenfrei, Marvin: Some Notes on the Determination of the Stick-Free Neutral Point from Wind-Tunnel Data. RB 4B21 (WR L-251), Feb. 1944.
- Pitkin, Marvin: Force Tests of a 1/5-Scale Model of the Type GB-5 Controllable Glide Bomb. MR (WR L-133), March 1944.
- Mathews, Charles W.: An Analytical Investigation of the Effects of Elevator-Fabric Distortion on the Longitudinal Stability and Control of an Airplane. ACR L4E30 (WR L-142), May 1944.
- Stevens, Victor I.; Douglass, William M. and Dods, Jules B., Jr.: Wind-Tunnel Investigation of a 1/20-Scale Powered Model of the Douglas C-74 Airplane. MR (WR A-94), May 1944.
- Weil, Joseph and Wells, Evalyn G.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. I - Preliminary Investigation of Longitudinal Stability. MR (WR L-667), June 1944.
- Harper, Charles W. and Wick, Bradford H.: A Comparison of the Effects of Four-Blade Dual- and Single-Rotation Propellers on the Stability and Control Characteristics of a High-Powered Single-Engine Airplane. ARR 4F17 (WR A-43), June 1944.
- Campbell, John P. and Paulson, John W.:
 The Effects of Static Margin and Rotational Damping in Pitch on the Longitudinal Stability Characteristics of an Airplane as Determined by Tests of a Model in the NACA Free-Flight Tunnel. ARR L4F02 (WR L-55), June 1944.

- White, Maurice D.: Effect of Power on the Stick-Fixed Neutral Points of Several Single-Engine Monoplanes as Determined in Flight. CB L4H01 (WR L-24), Aug. 1944.
- Hall, Charles F. and Mannes, Robert L.:
 Longitudinal Characteristics and
 Aileron Effectiveness of the XB-42
 Airplane from High-Speed WindTunnel Tests. MR (WR A-84), Sept.
 1944.
- Goranson, R. Fabian: A Method for Predicting the Elevator Deflection Required to Land. ARR L4I16 (WR L-95), Sept. 1944.
- Wick, Bradford H. and Randall, Lauros, M.: Estimated Longitudinal-Stability and Control Characteristics of the Revised Vega XP2V-1 Airplane with a B-17F Horizontal Tail Including Comparative Results for a Varicam Horizontal Tail. MR, Sept. 1944.
- Pitkin, Marvin and Maggin, Bernard: Analysis of Factors Affecting Net Lift Increment Attainable with Trailing-Edge Split Flaps on Tailless Airplanes. ARR L4I18 (WR L-164), Sept. 1944.
- Cleary, Harold E.: Variation of Peak Pitching-Moment Coefficients for Six Airfoils as Affected by Compressibility. ACR L4H17 (WR L-515), Oct. 1944.
- Bielat, Ralph P.: Effect of Compressibility on Longitudinal Stability and Control of 1/5.5-Scale Model of Fighter Airplane. ACR L4J02, Oct. 1944.
- Weiberg, James A. and Schnurbusch, Alfred W.: Flying Qualities of a Bomber Airplane with Engines in the Fuselage as Estimated from Tests of a 1/8-Scale Powered Model. MR A4K04 (WR A-78), Nov. 1944.
- Crane, H. L.; Sjoberg, S. A. and Hoover, H. H.: Measurement of Flying Qualities of a Douglas A-26B Airplane (AAF No. 41-39120). I - Longitudinal Stability and Control Characteristics. MR L4L06 (WR L-605), Dec. 1944.
- Purser, Paul E. and Campbell, John P.: Experimental Verification of a Simplified Vee-Tail Theory and Analysis of Available Data on Complete Models with Vee Tails. Rept. 823, 1945.
- Brewer, Gerald W.: Langley Full-Scale-Tunnel Stability and Control Tests of the Bell YP-59A Airplane. MR L5A18 (WR L-626), Jan. 1945.

Longitudinal Static Stability (Cont.)

- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweep-back in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.
- Harmon, S. M.: Determination of the Effect of Horizontal-Tail Flexibility on Longitudinal Control Characteristics. (WR L-45), Feb. 1945.
- Phillips, William H.: The Use of Geared Spring Tabs for Elevator Control. RB L5A13 (WR L-30), Feb. 1945.
- White, Maurice D.: Estimation of Stick-Fixed Neutral Points of Airplanes. CB L5C01 (WR L-116), March 1945.
- Kleckner, Harold F.: Preliminary Flight Research on an All-Movable Horizontal Tail as a Longitudinal Control for Flight at High Mach Numbers. ARR L5C08 (WR L-89), March 1945.
- Delany, Noel K. and Kauffman, William M.:
 Correlation of Wind-Tunnel Predictions with Flight Tests of a Twin-Engine Patrol Airplane. I Longitudinal-Stability and -Control Characteristics. MR A5D04 (WR A-86), April 1945.
- Hamilton, William T. and Boddy, Lee E.: High Speed Wind Tunnel Tests of a 0.3-Scale Model of the P-47D Airplane. ACR A5D20, May 1945.
- Weil, Joseph and Boykin, Rebecca I.: Wind-Tunnel Tests of the 0.15-Scale Powered Model of the Fleetwings XBTK-1 Airplane. I - Longitudinal Stability and Control. TED No. NACA 2332. MR L5D27a (WR L-785), May 1945.
- Robinson, Robert C. and Jessen, Henry: The Effect of Mach Number on the Aerodynamic Characteristics of a Single Engine Pursuit Airplane as Determined from Tests of a 1/3-Scale Model. MR A5E03 (WR A-76), May 1945.
- Goranson, R. Fabian: Flight Tests of an SB2C-3 Airplane with a Production and Tilted Propeller Axis TED No. NACA 2202. MR L5E19a (WR L-675), May 1945.
- Feigenbaum, D.: Estimation of the Performance and Longitudinal Stability and Control of a Lifting-Body Type of Cargo Airplane from Tests of Simplified Models. MR L5E09a (WR L-541), June 1945.

- Paulson, John W. and Bennett, Charles V.: Stability and Control Characteristics of a Fighter Airplane in Inverted Flight Attitude as Determined by Model Tests. ARR L5F25a (WR L-15), Aug. 1945.
- MacDougall, George F., Jr. and Schneiter, Leslie E.: Longitudinal-Trim Tests of a 0.059-Scale Model of the Curtiss-Wright XP-55 Airplane. MR L5G31 (WR L-538), Aug. 1945.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Effect of Wing Modifications on the Longitudinal Stability of a Tailless All-Wing Airplane Model. ACR L5G23 (WR L-42), Sept. 1945.
- Harmon, Sidney M.: Comparison of Fixed-Stabilizer, Adjustable-Stabilizer and All-Movable Horizontal Tails. ACR L5H04 (WR L-195), Oct. 1945.
- Hanson, Frederick H., Jr.: The Effect of a Wing-Tip-Mounted Fuel Tank on the Aerodynamic Characteristics of a High-Speed Bomber Wing. ACR 5H06, Oct. 1945.
- Weiberg, James A. and Schnurbusch, Alfred W.: Aerodynamic Characteristics of a 1/8-Scale Powered Model of a Bomber Airplane with Engines in the Fuselage. MR A5J12 (WR A-89), Oct. 1945.
- Davis, Wallace F. and Brown, Sherwood H.: Wind-Tunnel Investigation of the Effect of Jet-Motor Operation on Stability. ACR (WR A-31), Nov. 1945.
- McCormack, Gerald: Tests of an Attack-Type Airplane in the Ames 40 x 80 Foot Wind-Tunnel To Improve the High-Speed Maneuvering Control-Forces Characteristics. MR A5K16 (WR A-2), Dec. 1945.
- Turner, William N.; Steffen, Paul J. and Clousing, Lawrence A.: Compressibility Effects on the Longitudinal Stability and Control of a Pursuit-Type Airplane as Measured in Flight. Rept. 854, 1946.
- Stone, Ralph W., Jr. and Daughtridge, Lee T., Jr.: Free-Spinning, Longitudinal-Trim, and Tumbling Tests of 1/17.8-Scale Models of the Cornelius XFG-1 Glider. MR L5K21 (WR L-738), Jan. 1946.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.

- Longitudinal Static Stability (Cont.)
- Hunter, Paul A. and Reeder, John P.: Flight Measurements to Determine Effect of a Spring-Loaded Tab on Longitudinal Stability of an Airplane. ARR L5120 (WR L-210), Feb. 1946.
- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.
- Letko, William and Goodman, Alex: Preliminary Wind-Tunnel Investigation at Low Speed of Stability and Control Characteristics of Swept-Back Wings. TN 1046, April 1946.
- Anderson, Joseph L. and Tkac, Victor B.: High-Speed Wind-Tunnel Tests of a Model of the North American XP-82 Airplane. MR A6D03 (WR A-75), April 1946.
- Paulson, John W.; Johnson, Joseph L. and Varney, Elizabeth P.: Stability and Control Force Tests of Four- and Six-Unit Wing Designs of Low Aspect Ratio and 20° Triangular Plan Form. ACR L6D17a, May 1946.
- Gillis, Clarence L. and Weil, Joseph: Some Notes on the Effects of Jet-Exit Design on Static Longitudinal Stability. MR L6D30a (WR L-589), May 1946.
- Phillips, William H.: An Investigation of Additional Requirements for Satisfactory Elevator Control Characteristics. TN 1060, June 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Shortal, Joseph A. and Maggin, Bernard: Effect of Sweepback and Aspect Ratio on Longitudinal Stability Characteristics of Wings at Low Speeds. TN 1093, July 1946.
- Robinson, Robert C. and Perone, Angelo: The High-Speed Longitudinal Stability and Control of the Bell P-39N-1 Airplane as Calculated from Propeller-Off Tests of a 0.35-Scale Model. RM A6L27, Jan. 1947.
- Ribner, Herbert S. and MacLachlan, Robert: Effect of Slipstream Rotation in Producing Asymmetric Forces on a Fuselage. TN 1210, March 1947.
- Kaplan, Carl: Effect of Compressibility at High Subsonic Velocities on the Moment Acting on an Elliptic Cylinder. TN 1218, March 1947.

- Wallace, Arthur R.; Rossi, Peter F. and Wells, Evalyn G.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Longitudinal Stability Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1239, April 1947.
- Hanson, Carl M. and Anderson, Seth B.:
 Flight Tests of a Double-Hinged Horizontal Tail Surface with Reference to
 Longitudinal-Stability and -Control
 Characteristics. TN 1224, May 1947.
- Campbell, John P. and Drake, Hubert M.:
 Investigation of Stability and Control
 Characteristics of an Airplane Model
 with Skewed Wing in the Langley FreeFlight Tunnel. TN 1208, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Low-Speed Stability and Damping-In-Roll Characteristics of Some Highly Swept Wings. TN 1286, May 1947.
- Rathert, George A., Jr.: Flight Investigation of the Effects on Airplane Static Longitudinal Stability of a Bungee and Engine-Tilt Modifications. TN 1260, May 1947.
- Lowry, John G. and Schneiter, Leslie E.:
 Investigation at Low Speed of the Longitudinal Stability Characteristics of a 60° Swept-Back Tapered Low-Drag Wing. TN 1284, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Longitudinal Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1339, July 1947.
- Letko, William and Feigenbaum, David: Wind-Tunnel Investigation of Split Trailing-Edge Lift and Trim Flaps on a Tapered Wing with 23° Sweepback. TN 1352, July 1947.
- Schade, Robert O.: Effect of Geometric Dihedral on the Aerodynamic Characteristics of Two Isolated Vee-Tail Surfaces. TN 1369, July 1947.

- Longitudinal Static Stability (Cont.)
- Purser, Paul E.; Spearman, M. Leroy and Bates, William R.: Preliminary Investigation at Low Speed of Downwash Characteristics of Small-Scale Sweptback Wings. TN 1378, July 1947.
- Hall, Charles F.: The Effect of Modifications to the Horizontal-Tail Profile on the High-Speed Longitudinal Control of a Pursuit Airplane. TN 1302, Aug. 1947.
- Stevenson, David B. and Byrne, Robert W.:
 High-Speed Wind-Tunnel Tests of an
 NACA 16-009 Airfoil Having a 32.9Percent-Chord Flap with an Overhang
 20.7 Percent of the Flap Chord. TN
 1406, Aug. 1947.
- Stevenson, David B. and Adler, Alfred A.:
 High-Speed Wind-Tunnel Tests of an
 NACA 0009-64 Airfoil Having a 33.4Percent-Chord Flap with an Overhang
 20.1 Percent of the Flap Chord. TN
 1417, Sept. 1947.
- Tosti, Louis P.: Low-Speed Static Stability and Damping-in-Roll Characteristics of Some Swept and Unswept Low-Aspect-Ratio Wings. TN 1468, Oct. 1947.
- Purser, Paul E. and Spear, Margaret F.: Wind-Tunnel Investigation of Effects of Unsymmetrical Horizontal-Tail Arrangements on Power-On Static Longitudinal Stability of a Single-Engine Airplane Model. TN 1474, Oct. 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- DeYoung, John: Theoretical Additional Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1491, Dec. 1947.
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Hopkins, Edward J.: An Exploratory Investigation of the Relative Merits of Split and Chord-Extension Flaps on a 45° Swept-Back Wing. RM A8A16, May 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.

- Heaslet, Max. A. and Lomax, Harvard: The Calculation of Downwash Behind Supersonic Wings with an Application to Triangular Plan Forms. TN 1620, June 1948.
- Schneiter, Leslie E. and Watson, James M.: Low-Speed Wind-Tunnel Investigation of Various Plain-Spoiler Configurations for Lateral Control on a 42° Sweptback Wing. TN 1646, June 1948.
- Letko, William and Cowan, John W.: Effect of Taper Ratio on Low-Speed Static and Yawing Stability Derivatives of 45° Sweptback Wings with Aspect Ratio of 2.61. TN 1671, July 1948.
- Goodman, Alex and Brewer, Jack D.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Static and Yawing Stability. Derivatives of Untapered Wings. TN 1669, Aug. 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Longitudinal Stability, Stalling, and Lift Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1679, Aug. 1948.
- Queijo, M. J. and Jaquet, Byron M.: Investigation of Effects of Geometric Dihedral on Low-Speed Static Stability and Yawing Characteristics of an Untapered 45° Sweptback-Wing Model of Aspect Ratio 2.61. TN 1668, Sept. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.:
 Investigation of a 1/7-Scale Powered
 Model of a Twin-Boom Airplane and a
 Comparison of its Stability, Control,
 and Performance with Those of a
 Similar All-Wing Airplane. TN 1649,
 Oct. 1948.
- Weil, Joseph and Sleeman, William C., Jr.:
 Prediction of the Effects of Propeller
 Operation on the Static Longitudinal
 Stability of Single-Engine Tractor
 Monoplanes with Flaps Retracted.
 TN 1722, Oct. 1948.
- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Stability, Control, and Stalling Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 80-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1743, Nov. 1948.

- Longitudinal Static Stability (Cont.)
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Mungall, Robert G.: Flight Investigation of a Combined Geared Unbalancing-Tab and Servotab Control System as Used with an All-Movable Horizontal Tail. TN 1763, Dec. 1948.
- Johnson, Harold S.: Wind-Tunnel Investigation of Effects of Tail Length on the Longitudinal and Lateral Stability Characteristics of a Single-Propeller Airplane Model. TN 1766, Dec. 1948.
- Nielsen, Jack N. and Perkins, Edward W.: Charts for the Conical Part of the Downwash Field of Swept Wings at Supersonic Speeds. TN 1780, Dec. 1948.
- McCormack, Gerald M. and Cook, Woodrow L.: A Study of Stall Phenomena on a 45° Swept-Forward Wing. TN 1797, Jan. 1949.
- Lomax, Harvard and Sluder, Loma: Downwash in the Vertical and Horizontal Planes of Symmetry Behind a Triangular Wing in Supersonic Flow. TN 1803, Jan. 1949.
- MacLeod, Richard G.: Aerodynamic Characteristics of a Flying-Boat Hull Having a Length-Beam Ratio of 15 and a Warped Forebody. RM L9A03, Feb. 1949.
- Diederich, Franklin W.: Calculation of the Aerodynamic Loading of Flexible Wings of Arbitrary Plan Form and Stiffness. TN 1876, April 1949.
- Lange, Roy H., Jr.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.
- Kempf, Günther: Moments of Cambered Round Bodies. TM 1227, Aug. 1949.
- Mirels, Harold and Haefeli, Rudolph C.: Line-Vortex Theory for Calculation of Supersonic Downwash. TN 1925, Aug. 1949.

Lateral Static Stability (1.8.1.1.2)

Munk, Max M.: Note on the Relative Effect of the Dihedral and the Sweep Back of Airplane Wings. TN 177, Jan. 1924.

- Diehl, Walter S.: Tests on Airplane Fuselages, Floats and Hulls. Rept. 236, 1926.
- Knight, Montgomery and Loeser, Oscar, Jr.: Pressure Distribution over a Rectangular Monoplane Wing Model up to 90° Angle of Attack. Rept. 288, 1928.
- Katzmayr, Richard: Travel of the Center of Pressure of Airfoils Transversely to the Air Stream. TM 530, Sept. 1929.
- Knight, Montgomery and Noyes, Richard W.: Span-Load Distribution as a Factor in Stability in Roll. Rept. 393, 1931.
- Fuchs, Richard and Schmidt, Wilhelm: The Dangerous Sideslip of a Stalled Airplane and its Prevention. TM 638, Sept. 1931.
- Zimmerman, C. H.: Characteristics of Clark Y Airfoils of Small Aspect Ratios. Rept. 431, 1932.
- Weick, Fred E.; Soule, Hartley A. and Gough, Melvin N.: A Flight Investigation of the Lateral Control Characteristics of Short Wide Ailerons and Various Spoilers with Different Amounts of Wing Dihedral. Rept. 494, 1934.
- Mathias, Gotthold: The Calculation of Lateral Stability with Free Controls. TM 741, April 1934.
- Mathias, Gotthold: Supplemental Data and Calculations of the Lateral Stability of Airplanes. TM 742, April 1934.
- Shortal, Joseph A.: Effect of Tip Shape and Dihedral on Lateral-Stability Characteristics. Rept. 548, 1935.
- Ferrari, C.: Some Experiments on the Slipstream Effect. TM 820, March 1937.
- Reed, Warren D. and Clay, William C.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with External-Airfoil Flaps. TN 604, July 1937.
- Troller, Th. and Rokus, F.: Pressure-Distribution Measurements on a Tapered Wing with a Full-Span Split Flap in Curved Flight. TN 683, Jan. 1939.
- Bamber, M. J. and House, R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. I - Four NACA 23012 Wings of Various Planforms with and Without Dihedral. TN 703, April 1939.

- Lateral Static Stability (Cont.)
- Bamber, M. J. and House, R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. II - Rectangular NACA 23012 Wing with a Circular Fuselage and a Fin. TN 730, Sept. 1939.
- Rokus, Frank G.: Pressure-Distribution Measurements on a Rectangular Wing with a Partial-Span Split Flap in Curved Flight. TN 742, Dec. 1939.
- Imlay, Frederick H.: A Theoretical Study of Lateral Stability with an Automatic Pilot. Rept. 693, 1940.
- House, Rufus O. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effect of
 Interference of Lateral-Stability Characteristics of Four NACA 23012 Wings
 an Elliptical and a Circular Fuselage
 and Vertical Fins. Rept. 705, 1941.
- Rogallo, Francis M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Plain and Slot-Lip Aileron on a Wing with a Full-Span Slotted Flap. ACR (WR L-375), April 1941.
- Lowry, John G.: Power-Off Wind-Tunnel Tests of the 1/8-Scale Model of the Brewster F2A Airplane. MR (WR L-543), June 1941.
- Recant, Isidore G. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effect of
 Yaw on Lateral-Stability Characteristics. III Symmetrically Tapered Wing
 at Various Positions on Circular Fuselage with and Without a Vertical Tail.
 TN 825, Sept. 1941.
- Recant, I. G. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effects of
 Yaw on Lateral-Stability Characteristics. IV Symmetrically Tapered Wing
 with a Circular Fuselage Having a
 Wedge-Shaped Rear and a Vertical
 Tail. ARR (WR L-520), March 1942.
- Runckel, Jack F.: The Effect of Pitch on Force and Moment Characteristics of Full-Scale Propellers of Five Solidities. ARR (WR L-446), June 1942.
- Lowry, John G. and Liddell, Robert B.:
 Wind-Tunnel Investigation of a Tapered
 Wing with a Plug-Type Spoiler-Slot
 Aileron and Full-Span Slotted Flaps.
 ARR (WR L-250), July 1942.
- Clousing, Lawrence A. and McAvoy,
 William H.: Flight Measurements of
 the Lateral-Control Characteristics of
 an Airplane Equipped with a Combination Aileron-Spoiler Control System.
 MR (WR A-68), Sept. 1942.

- Fehlner, Leo F.: A Study of the Effect of Adverse Yawing Moment on Lateral Maneuverability at a High Lift Coefficient. ARR (WR L-465), Sept. 1942.
- Campbell, John P.: Free-Flight Tunnel Investigation of the Effect of Full-Span Flaps on Lateral Stability and Control. ARR, Oct. 1942.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of a Plain Aileron with Various Trailing-Edge Modifications on a Tapered Wing. II - Ailerons with Thickened and Beveled Trailing Edges. ARR (WR L-228), Oct. 1942.
- Bamber, M. J.: Effect of Changes in Aspect Ratio, Side Area, Flight-Path Angle, and Normal Acceleration on Lateral Stability. ARR (WR L-403), Dec. 1942.
- Belsley, Steven E. and Jackson, Roy P.: The Effect of Amphibious Floats on the Power-Off Stability and Control Characteristics of a Twin-Engine Cargo Airplane. MR (WR A-73), Jan. 1943.
- Turner, William N. and Adams, Betty:
 Flight Measurements of the Effects
 of a Wing Leading-Edge Slot and Other
 Modifications on the Stability, Maximum Lift, and High Speed of an Observation Airplane. MR (WR A-88),
 Jan. 1943.
- Biebel, William J.: Full-Scale Tunnel Tests of a Flying Model of the Curtiss XP-55 Airplane. MR (WR L-627), Jan. 1943.
- Sweberg, Harold H.: Stability and Control Tests of a 3/4-Scale Model of the XP-69 Airplane in the NACA Full-Scale Tunnel. MR (WR L-642), Jan. 1943.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Tests of a Twin-Engine Model to Determine the Effect of Direction of Propeller Rotation on the Static-Stability Characteristics. ARR (WR L-295), Jan. 1943.
- Laitone, Edmund V.: Investigation of the Longitudinal Stability at High Speeds of a 1/5-Scale Model of a Tailless Pursuit Airplane. MR (WR A-77), March 1943.
- Rhode, Richard V. and Pearson, H. A.:
 Observations of Compressibility
 Phenomena in Flight. ACR 3D15 (WR L-417), April 1943.
- Wallace, Arthur R. and Turner, Thomas R.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. V Symmetrically Tapered Wing with a Circular Fuselage Having a Horizontal and a Vertical Tail. ARR 3F23 (WR L-459), June 1943.

- Lateral Static Stability (Cont.)
- Recant, I. G. and Wallace, Arthur R.:
 Wind-Tunnel Tests of the 1/9-Scale
 Model of the Curtiss XP-62 Airplane
 with Various Vertical Tail Arrangements. MR (WR L-779), July 1943.
- Turner, William N. and Adams, Betty: Flight Measurements of the Effect of Various Amounts of Aileron Droop on the Low-Speed Lateral-Control Characteristics of an Observation Airplane. MR (WR A-79), Aug. 1943.
- Stevens, Victor I., Jr. and McCullough, George B.: Flying Qualities of the PV-1 as Estimated from Wind-Tunnel Tests. MR (WR A-93), Oct. 1943.
- Pitkin, Marvin: Free-Flight-Tunnel Investigation of the Effect of Mode of Propeller Rotation upon the Lateral-Stability Characteristics of a Twin-Engine Airplane Model with Single Vertical Tails of Different Size. ARR 3J18 (WR L-354), Oct. 1943.
- Spahr, J. Richard and Christopherson, Don R.: Measurements in Flight of the Stability, Lateral-Control, and Stalling Characteristics of an Airplane Equipped with Full-Span Zap Flaps and Spoiler-Type Ailerons. MR (WR A-28), Dec. 1943.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Teplitz, Jerome: Effects of Small Angles of Sweep and Moderate Amounts of Dihedral on Stalling and Lateral Characteristics of a Wing-Fuselage Combination Equipped with Partial and Full-Span Double-Slotted Flaps. Rept. 800, 1944.
- Brewer, Gerald W.: Tests of the Northrop MX-334 Glider Airplane in the NACA Full-Scale Tunnel. MR (WR L-628), Jan. 1944.
- Pitkin, Marvin: Force Tests of a 1/5-Scale Model of the Type GB-5 Controllable Glide Bomb. MR (WR L-133), March 1944.
- Neely, R. H.; Fogarty, L. E. and Alexander, S. R.: Comparison of Yaw Characteristics of a Single-Engine Airplane Model with Single-Rotating and Dual-Rotating Propellers. ACR L4D19 (WR L-83), April 1944.

- Fehlner, Leo F. and MacLachlan, Robert: Investigation of Effect of Sideslip on Lateral Stability Characteristics. I Circular Fuselage with Variations in Vertical-Tail Area and Tail Length with and Without Horizontal Tail Surface. ARR L4E25 (WR L-12), May 1944.
- Harper, Charles W. and Wick, Bradford H.:
 A Comparison of the Effects of Four-Blade Dual- and Single-Rotation Propellers on the Stability and Control Characteristics of a High-Powered Single-Engine Airplane. ARR 4F17 (WR A-43), June 1944.
- Wallace, Arthur R.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. II - Preliminary Investigation of Lateral Stability and Control. MR (WR L-787), Aug. 1944.
- Hall, Charles F. and Mannes, Robert L.:
 Longitudinal Characteristics and
 Aileron Effectiveness of the XB-42 Airplane from High-Speed Wind-Tunnel
 Tests. MR (WR A-84), Sept. 1944.
- Ashworth, C. Dixon; Spooner, Stanley H. and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. I Full-Span Flap and Airbrake Investigation. MR (WR L-563), Sept. 1944.
- Spooner, Stanley H.; Ashworth, C. Dixon and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 10-Foot Pressure Tunnel. II Roll-Flap Positioning and Lateral-Control Investigation. MR (WR L-564), Sept. 1944.
- Ribner, Herbert S.: Formulas for Propellers in Yaw and Charts of the Side-Force Derivative. Rept. 819, 1945.
- Purser, Paul E. and Campbell, John P.: Experimental Verification of a Simplified Vee-Tail Theory and Analysis of Available Data on Complete Models with Vee Tails. Rept. 823, 1945.
- Brewer, Gerald W.: Langley Full-Scale-Tunnel Stability and Control Tests of the Bell YP-59A Airplane. MR L5A18 (WR L-626), Jan. 1945.
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.

Lateral Static Stability (Cont.)

- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer No. 04776) II. Lateral and Directional Stability and Control. MR L5B13a (WR L-716), Feb. 1945.
- Hollingworth, Thomas A.: Investigation of Effect of Sideslip on Lateral Stability Characteristics. II Rectangular Midwing on Circular Fuselage with Variations in Vertical-Tail Area and Fuselage Length with and Without Horizontal Tail Surface. ARR L5C13 (WR L-8), April 1945.
- Hollingworth, Thomas A.: Investigation of Effect of Sideslip on Lateral Stability Characteristics. III Rectangular Low Wing on Circular Fuselage with Variations in Vertical-Tail Area and Fuselage Length with and Without Horizontal Tail Surface. ARR L5C13a (WR L-17), April 1945.
- Goodson, Kenneth W. and Silvers, H.
 Norman: Wind-Tunnel Tests of the
 0.15-Scale Powered Model of the Fleetwings XBTK-1 Airplane. III Lateral
 Stability and Control TED No. NACA
 2332. MR L5F20 (WR L-786), July
 1945.
- Pitkin, Marvin and Schade, Robert O.:
 Tests of a Linked Differential Flap
 System Designed to Minimize the
 Reduction in Effective Dihedral Caused
 by Power. ARR L5F25 (WR L-4),
 Aug. 1945.
- Paulson, John W. and Bennett, Charles V.: Stability and Control Characteristics of a Fighter Airplane in Inverted Flight Attitude as Determined by Model Tests. ARR L5F25a (WR L-15), Aug. 1945.
- Delany, Noel K. and Kauffman, William M.:
 Correlation of Wind-Tunnel Predictions
 with Flight Tests of a Twin-Engine
 Patrol Airplane. II Lateral- and
 Directional-Stability and -Control
 Characteristics. MR A5H30 (WR A-71),
 Aug. 1945.
- McKinney, Marion O., Jr.: Experimental Determination of the Effect of Negative Dihedral on Lateral Stability and Control Characteristics at High Lift Coefficients. ARR L5J02 (WR L-54), Jan. 1946.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.

- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.
- Letko, William and Goodman, Alex: Preliminary Wind-Tunnel Investigation at Low Speed of Stability and Control Characteristics of Swept-Back Wings. TN 1046, April 1946.
- Paulson, John W.; Johnson, Joseph L. and Varney, Elizabeth P.: Stability and Control Force Tests of Four- and Six-Unit Wing Designs of Low Aspect Ratio and 20° Triangular Plan Form. ACR L6D17a, May 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Goranson, R. Fabian: Flight Tests of Experimental Beveled-Trailing-Edge Frise Ailerons on a Fighter Airplane. TN 1085, July 1946.
- Purser, Paul E. and Spear, Margaret F.:
 Tests To Determine Effects of Slipstream Rotation on the Lateral Stability
 Characteristics of a Single-Engine
 Low-Wing Airplane Model. TN 1146,
 Sept. 1946.
- Maggin, Bernard and Shanks, Robert E.:
 The Effect of Geometric Dihedral on
 the Aerodynamic Characteristics of a
 40° Swept-Back Wing of Aspect Ratio
 3. TN 1169, Dec. 1946.
- Spahr, J. Richard: Lateral-Control Characteristics of Various Spoiler Arrangements as Measured in Flight. TN 1123, Jan. 1947.
- Ribner, Herbert S. and MacLachlan, Robert: Effect of Slipstream Rotation in Producing Asymmetric Forces on a Fuselage. TN 1210, March 1947.
- Lange, Roy H.: Langley Full-Scale-Tunnel Investigation of the Factors Affecting the Static Lateral-Stability Characteristics of a Typical Fighter-Type Airplane. RM L6L18, April 1947.
- Wallace, Arthur R. and Comenzo, Raymond J.: Effect of Engine Skew on Directional and Lateral Control Characteristics of Single-Engine Airplanes. RM L6I16, May 1947.
- Campbell, John P. and Drake, Hubert M.: Investigation of Stability and Control Characteristics of an Airplane Model with Skewed Wing in the Langley Free-Flight Tunnel. TN 1208, May 1947.

Lateral Static Stability (Cont.)

- Bennett, Charles V. and Johnson, Joseph L.: Experimental Determination of the Damping In Roll and Aileron Rolling Effectiveness of Three Wings Having 2°, 42°, and 62° Sweepback. TN 1278, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Low-Speed Stability and Damping-In-Roll Characteristics of Some Highly Swept Wings. TN 1286, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Tamburello, Vito and Weil, Joseph: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1327, June 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1379, July 1947.
- Forsyth, Charles M. and Gray, William E., Jr.: A Comparison of Flight-Test Results on a Scout-Bomber Airplane with 4.7° and with 10° Geometric Dihedral in the Wing Outer Panels. TN 1407, Aug. 1947.
- Tosti, Louis F.: Low-Speed Static Stability and Damping-in-Roll Characteristics of Some Swept and Unswept Low-Aspect-Ratio Wings. TN 1468, Oct. 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a 35°
 Sweptback Wing with 40-Percent-Span
 Slots and a Comparison with WindTunnel Data. TN 1511, Jan. 1948.
- Lovell, Powell M., Jr.: The Effect of Wing Bending Deflection on the Rolling Moment Due to Sideslip. TN 1541, Feb. 1948.

- Moeckel, W. E.: Effect of Yaw at Supersonic Speeds on Theoretical Aerodynamic Coefficients of Thin Pointed Wings with Several Types of Trailing Edge. TN 1549, March 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Letko, William and Cowan, John W.: Effect of Taper Ratio on Low-Speed Static and Yawing Stability Derivatives of 45° Sweptback Wings with Aspect Ratio of 2.61. TN 1671, July 1948.
- Goodman, Alex and Brewer, Jack D.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Static and Yawing Stability Derivatives of Untapered Wings. TN 1669, Aug. 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Queijo, M. J. and Jaquet, Byron M.: Investigation of Effects of Geometric Dihedral on Low-Speed Static Stability and Yawing Characteristics of an Untapered 45° Sweptback-Wing Model of Aspect Ratio 2.61. TN 1668, Sept. 1948.
- Jones, Arthur L.; Spreiter, John R. and Alksne, Alberta: The Rolling Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1700, Sept. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.:
 Investigation of a 1/7-Scale Powered
 Model of a Twin-Boom Airplane and a
 Comparison of its Stability, Control,
 and Performance with Those of a
 Similar All-Wing Airplane. TN 1649,
 Oct. 1948.
- Johnson, Joseph L. and Sternfield, Leonard: A Theoretical Investigation of the Effect of Yawing Moment due to Rolling on Lateral Oscillatory Stability. TN 1723, Oct. 1948.
- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.

Lateral Static Stability (Cont.)

- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Stability, Control, and Stalling Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 80-Percent-Span Slots and a Comparison with Wing-Tunnel Data. TN 1743, Nov. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7 Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Johnson, Harold S.: Wind-Tunnel Investigation of Effects of Tail Length on the Longitudinal and Lateral Stability Characteristics of a Single-Propeller Airplane Model. TN 1766, Dec. 1948.
- Kauffman, William M.; Smith, Allan; Liddell, Charles J., Jr. and Cooper, George E.: Flight Tests of an Apparatus for Varying Dihedral Effect in Flight. TN 1788, Dec. 1948.
- Margolis, Kenneth: Effect of Thickness on the Lateral Force and Yawing Moment of a Sideslipping Delta Wing at Supersonic Speeds. TN 1798, Jan. 1949.
- Jones, Arthur L. and Alksne, Alberta: The Yawing Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1850, April 1949.
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.
- Liddell, Charles J., Jr.; Van Dyke, Rudolph D., Jr. and Heinle, Donovan R.: A Flight Determination of the Tolerable Range of Effective Dihedral on a Conventional Fighter Airplane. TN 1936, Aug. 1949.

Directional Static Stability (1.8.1.1.3)

- Bacon, D. L.: Freliminary Experiments to Determine Scale and Slipstream Effects on a 1/24th Size Model of a JN4H Biplane. Rept. 122, 1921.
- Norton, F. H. and Brown, S. G.: Pressure Distribution over the Rudder and Fin of an Airplane in Flight. Rept. 149, 1922.
- Rizzo, Frank: A Study of Static Stability of Airships. TN 204, Sept. 1924.

- Zahm, A. F.; Smith, R. H. and Louden, F. A.: Air Forces, Moments and Damping on Model of Fleet Airship Shenandoah. Rept. 215, Aug. 1925.
- Montieth, Charles N.: Slipstream Effect. TM 355, March 1926.
- Dryden, Hugh L. and Monish, B. H.: The Effect of Area and Aspect Ratio on the Yawing Moments of Rudders at Large Angles of Pitch on Three Fuselages. Rept. 437, 1932.
- Shortal, Joseph A.: Effect of Tip Shape and Dihedral on Lateral-Stability Characteristics. Rept. 548, 1935.
- Imlay, Frederick H.: The Estimation of the Rate of Change of Yawing Moment with Sideslip. TN 636, Feb. 1938.
- Troller, Th. and Rokus, F.: Pressure-Distribution Measurements on a Tapered Wing with a Full-Span Split Flap in Curved Flight. TN 683, Jan. 1939.
- Bamber, M. J. and House, R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. I - Four NACA 23012 Wings of Various Plan Forms with and Without Dihedral. TN 703, April 1939.
- Bamber, M. J. and House, R. O.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. II - Rectangular NACA 23012 Wing with a Circular Fuselage and a Fin. TN 730, Sept. 1939.
- Rokus, Frank G.: Pressure-Distribution Measurements on a Rectangular Wing with a Partial-Span Split Flap in Curved Flight. TN 742, Dec. 1939.
- Pass, H. R.: Analysis of Wind-Tunnel Data on Directional Stability and Control. TN 775, Sept. 1940.
- Thompson, F. L. and Gilruth, R. R.:
 Notes on the Stalling of Vertical Tail
 Surfaces and on Fin Design. TN 778,
 Oct. 1940.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Fuselage Stability in Yaw with Various Arrangements of Fins. TN 785, Nov. 1940.
- House, Rufus O. and Wallace, Arthur R.:
 Wind-Tunnel Investigation of Effect of
 Interference of Lateral-Stability Characteristics of Four NACA 23012 Wings
 an Elliptical and a Circular Fuselage
 and Vertical Fins. Rept. 705, 1941.

- Directional Static Stability (Cont.)
- Katzoff, S. and Mutterperl, William: The End-Plate Effect of a Horizontal-Tail Surface on a Vertical-Tail Surface. TN 797, Feb. 1941.
- Recant, Isidore G. and Wallace, Arthur R.: Wind-Tunnel Investigation of the Effect of Vertical Position of the Wing on the Side Flow in the Region of the Vertical Tail. TN 804, April 1941.
- Lowry, John G.: Power-Off Wind-Tunnel Tests of the 1/8-Scale Model of the Brewster F2A Airplane. MR (WR L-543), June 1941.
- Recant, Isidore G. and Wallace, Arthur R.: Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics. III Symmetrically Tapered Wing at Various Positions on Circular Fuselage with and Without a Vertical Tail. TN 825, Sept. 1941.
- Fehlner, Leo F.: A Study of the Effect of Adverse Yawing Moment on Lateral Maneuverability at a High Lift Coefficient. ARR (WR L-465), Sept. 1942.
- Bamber, M. J.: Effect of Changes in Aspect Ratio, Side Area, Flight-Path Angle, and Normal Acceleration on Lateral Stability. ARR (WR L-403), Dec. 1942.
- Belsley, Steven E. and Jackson, Roy P.: The Effect of Amphibious Floats on the Power-Off Stability and Control Characteristics of a Twin-Engine Cargo Airplane. MR (WR A-73), Jan. 1943.
- Biebel, William J.: Full-Scale Tunnel Tests of a Flying Model of the Curtiss XP-55 Airplane. MR (WR L-627), Jan. 1943.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Tests of a Twin-Engine Model to Determine the Effect of Direction of Propeller Rotation on the Static-Stability Characteristics. ARR (WR L-295), Jan. 1943.
- Kleckner, Harold F.: Flight Tests of an All-Movable Vertical Tail on the Fairchild XR2K-1 Airplane. ACR 3F26 (WR L-397), June 1943.
- Recant, I. G. and Wallace, Arthur R.:
 Wind-Tunnel Tests of the 1/9-Scale
 Model of the Curtiss XP-62 Airplane
 with Various Vertical Tail Arrangements. MR (WR L-779), July 1943.

- Pitkin, Marvin: Free-Flight-Tunnel Investigation of the Effect of Mode of Propeller Rotation upon the Lateral-Stability Characteristics of a Twin-Engine Airplane Model with Single Vertical Tails of Different Size. ARR 3J18 (WR L-354), Oct. 1943.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Brewer, Gerald W.: Tests of the Northrop MX-334 Glider Airplane in the NACA Full-Scale Tunnel. MR (WR L-628), Jan. 1944.
- Pitkin, Marvin: Force Tests of a 1/5-Scale Model of the Type GB-5 Controllable Glide Bomb. MR (WR L-133), March 1944.
- Neely, R. H.; Fogarty, L. E. and Alexander, S. R.: Comparison of Yaw Characteristics of a Single-Engine Airplane Model with Single-Rotating and Dual-Rotating Propellers. ACR L4D19 (WR L-83), April 1944.
- Harper, Charles W. and Wick, Bradford H.: A Comparison of the Effects of Four-Blade Dual- and Single-Rotation Propellers on the Stability and Control Characteristics of a High-Powered Single-Engine Airplane. ARR 4F17 (WR A-43), June 1944.
- Dods, Jules B., Jr. and Douglass, William M.: Wind-Tunnel Investigation of a 1/20-Scale Powered Model of a Four-Engine Transport Airplane. RMR (WR A-94), July 1944.
- Wallace, Arthur R.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. II - Preliminary Investigation of Lateral Stability and Control. MR (WR L-787), Aug. 1944.
- Weiberg, James A. and Schnurbusch, Alfred W.: Flying Qualities of a Bomber Airplane with Engines in the Fuselage as Estimated from Tests of a 1/8-Scale Powered Mode. MR A4K04 (WR A-78), Nov. 1944.
- Purser, Paul E. and Campbell, John P.: Experimental Verification of a Simplified Vee-Tail Theory and Analysis of Available Data on Complete Models with Vee Tails. Rept. 823, 1945.
- Pitkin, Marvin; Draper, John W. and Bennett, Charles V.: The Influence of Vertical-Tail Design and Direction of Propeller Rotation on Trim Characteristics of a Twin-Engine-Airplane Model with One Engine Inoperative. ARR L5A13 (WR L-191), Feb. 1945.

- Directional Static Stability (Cont.)
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.
- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer No. 04776). II - Lateral and Directional Stability and Control. MR L5B13a (WR L-716), Feb. 1945.
- Williams, Walter C.: Flight Tests of a Rudder with a Spring Tab on an F6F-3 Airplane (BuAer No. 04776). MR L5C19 (WR L-718), March 1945.
- Goodson, Kenneth W. and Silvers, H.
 Norman: Wind-Tunnel Tests of the
 0.15-Scale Powered Model of the
 Fleetwings XBTK-1 Airplane. III Lateral Stability and Control TED No.
 NACA 2332. MR L5F20 (WR L-786),
 July 1945.
- Delany, Noel K. and Kauffman, William M.: Correlation of Wind-Tunnel Predictions with Flight Tests of a Twin-Engine Patrol Airplane. II Lateraland Directional-Stability and -Control Characteristics. MR A5H30 (WR A-71), Aug. 1945.
- Paulson, John W. and Bennett, Charles V.: Stability and Control Characteristics of a Fighter Airplane in Inverted Flight Attitude as Determined by Model Tests. ARR L5F25a (WR L-15), Aug. 1945.
- Weiberg, James A. and Schnurbusch, Alfred W.: Aerodynamic Characteristics of a 1/8-Scale Powered Model of a Bomber Airplane with Engines in the Fuselage. MR A5J12 (WR A-89), Oct. 1945.
- Sweberg, Harold H.; Guryansky, Eugene R. and Lange, Roy H.: Langley Full-Scale Tunnel Investigation of the Factors Affecting the Directional Stability and Trim Characteristics of a Fighter-Type Airplane. ARR L5H09 (WR L-109), Nov. 1945.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.
- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.

- Letko, William and Goodman, Alex: Preliminary Wind-Tunnel Investigation at Low Speed of Stability and Control Characteristics of Swept-Back Wings. TN 1046, April 1946.
- Murray, Harry E.: Wind-Tunnel Investigation of End-Plate Effects of Horizontal Tails on a Vertical Tail Compared with Available Theory. TN 1050, April 1946.
- Paulson, John W.; Johnson, Joseph L. and Varney, Elizabeth P.: Stability and Control Force Tests of Four- and Six-Unit Wing Designs of Low Aspect Ratio and 20° Triangular Plan Form. ACR L6D17a, May 1946.
- MacLachlin, Robert and Levitt, Joseph: Wind-Tunnel Investigation of Effect of Canopies on Directional Stability Characteristics of a Single-Engine Airplane Model. TN 1052, May 1946.
- Bishop, Robert C. and Lomax, Harvard: A Simplified Method for Determining from Flight Data the Rate of Change of Yawing-Moment Coefficient with Sideslip. TN 1076, June 1946.
- Purser, Paul E. and Spear, Margaret F.:
 Tests to Determine Effects of Slipstream Rotation on the Lateral Stability Characteristics of a SingleEngine Low-Wing Airplane Model.
 TN 1146, Sept. 1946.
- Maggin, Bernard and Shanks, Robert E.: The Effect of Geometric Dihedral on the Aerodynamic Characteristics of a 40° Swept-Back Wing of Aspect Ratio 3. TN 1169, Dec. 1946.
- Mungall, Robert G.: Flight Measurements of the Directional Stability and Control of a P-51D Airplane with a Horn-Balanced Rudder as Compared with Previously Tested Vertical-Tail Configurations. RM L6J25, Dec. 1946.
- Ribner, Herbert S. and MacLachlan, Robert: Effect of Slipstream Rotation in Producing Asymmetric Forces on a Fuselage. TN 1210, March 1947.
- Campbell, John P. and Drake, Hubert M.: Investigation of Stability and Control Characteristics of an Airplane Model with Skewed Wing in the Langley Free-Flight Tunnel. TN 1208, May 1947.
- Bennett, Charles V. and Johnson, Joseph L.: Experimental Determination of the Damping in Roll and Aileron Rolling Effectiveness of Three Wings Having 2°, 42°, and 62° Sweepback. TN 1278, May 1947.

- Directional Static Stability (Cont.)
- Maggin, Bernard and Bennett, Charles V.: Low-Speed Stability and Damping-In-Roll Characteristics of Some Highly Swept Wings. TN 1286, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Wallace, Arthur R. and Comenzo, Raymond J.: Effect of Engine Skew on Directional and Lateral Control Characteristics of Single-Engine Airplanes. RM L6I16, May 1947.
- Tamburello, Vito and Weil, Joseph: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1327, June 1947.
- Schade, Robert O.: Effect of Geometric Dihedral on the Aerodynamic Characteristics of Two Isolated Vee-Tail Surfaces. TN 1369, July 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a 35° Sweptback Wing with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1511, Jan. 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Letko, William and Cowan, John W.: Effect of Taper Ratio on Low-Speed Static and Yawing Stability Derivatives of 45° Sweptback Wings with Aspect Ratio of 2.61. TN 1671, July 1948.

- Goodman, Alex and Brewer, Jack D.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Static and Yawing Stability Derivatives of Untapered Wings. TN 1669, Aug. 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Queijo, M. J. and Jaquet, Byron M.: Investigation of Effects of Geometric Dihedral on Low-Speed Static Stability and Yawing Characteristics of an Untapered 45° Sweptback-Wing Model of Aspect Ratio 2.61. TN 1668, Sept. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Stability, Control, and Stalling Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 80-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1743, Nov. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Johnson, Harold S.: Wind-Tunnel Investigation of Effects of Tail Length on the Longitudinal and Lateral Stability Characteristics of a Single-Propeller Airplane Model. TN 1766, Dec. 1948.
- Margolis, Kenneth: Effect of Thickness on the Lateral Force and Yawing Moment of a Sideslipping Delta Wing at Supersonic Speeds. TN 1798, Jan. 1949.
- MacLeod, Richard G.: Aerodynamic Characteristics of a Flying-Boat Hull Having a Length-Beam Ratio of 15 and a Warped Forebody. RM L9A03, Feb. 1949.
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.

Stability (Cont.)

DYNAMIC STABILITY (1.8.1.2)

- Klemin, Alexander; Warner, Edward P. and Dēnkinger, George M.: An Investigation of the Elements Which Contribute to Statical and Dynamical Stability, and of the Effects of Variation in Those Elements. Rept. 17 (1 Parts), 1917.
- Wilson, Edwin B.: Theory of an Airplane Encountering Gusts - H. Rept. 21, 1917.
- Bateman, H.: Stability of the Parachute and Helicopter. Rept. 80, 1920.
- Warner, Edward P. and Norton, F. H.: Angles of Attack and Air Speeds During Maneuvers. Rept. 105, 1921.
- Norton, F. H. and Allen, E. T.: Control in Circling Flight. Rept. 112, 1921.
- Norton, F. H.: A Mechanical Device for Illustrating Airplane Stability. TN 76, Dec. 1921.
- Norton, F. H.: The Small Angular Oscillations of Airplanes in Steady Flight. Rept. 174, 1923.
- Zahm, A. F.: Stability Equations for Airship Hulls. Rept. 212, 1925.
- Raethjen, P.: Kinetographic Determination of Airplane Flight Characteristics. TM 409, April 1927.
- Hübner, W.: Information Obtained from Airplane Flight Tests in the Year 1927-1928. TM 535, Oct. 1929.
- Upson, Ralph H. and Klikoff, W. A.: Application of Practical Hydrodynamics to Airship Design. Rept. 405, 1931.
- Von Baranoff, A. and Hopf, L.: Combined Pitching and Yawing Motion of Airplanes. TM 620, May 1931.
- Thompson, F. L.; Peck, W. C. and Beard, A. P.: Air Conditions Close to the Ground and the Effect on Airplane Landings. Rept. 489, 1934.
- Jones, Robert T.: A Simplified Application of the Method of Operators to the Calculation of Disturbed Motions of an Airplane. Rept. 560, 1936.
- Haus, Fr.: Theoretical Study of Various Airplane Motions After Initial Disturbance. TM 867, June 1938.
- Soulé, H. A.: Preliminary Investigation of the Flying Qualities of Airplanes. Rept. 700, 1940.

- Donlan, C. J. and Recant, I. G.: Methods of Analyzing Wind-Tunnel Data for Dynamic Flight Conditions. TN 828, Oct. 1941.
- Gracey, William: The Experimental Determination of the Moments of Inertia of Airplanes by a Simplified Compound-Pendulum Method. TN 1629, June 1948.
- Jones, Robert T. and Sternfield, Leonard:
 A Method for Predicting the Stability
 in Roll of Automatically Controlled Aircraft Based on the Experimental Determination of the Characteristics of
 an Automatic Pilot. TN 1901, June
 1949.

Longitudinal Dynamic Stability (1.8.1.2.1)

- Hunsaker, J. C.: Report on Behavior of Aeroplanes in Gusts. Part I - Experimental Analysis of Inherent Longitudinal Stability for a Typical Biplane. Wilson, E. B.: Part II - Theory of an Airplane Encountering Gusts. Rept. 1, 1915.
- Wilson, Edwin Bidwell: Theory of an Airplane Encountering Gusts, III. Rept. 27, 1919.
- Bateman, H.: Diagrams of Airplane Stability. Rept. 95, 1920.
- Norton, F. H.: Practical Stability and Controllability of Airplanes. Rept. 120, 1921.
- Huguet, L.: Airplane Balance. TN 51, June 1921.
- Hopf, L.: The Danger of Stalled Flight and an Analysis of the Factors Which govern it. TM 52, Nov. 1921.
- Munk, Max A.: The Tail Plane. Rept. 133, 1922.
- Chu, Lynn: Damping Coefficients Due to Tail Surfaces in Aircraft. Rept. 136, 1922.
- Senouque, A.: Testing Airplanes in Flight: Determining Position of Resultant of Action of Air and Longitudinal Stability of an Airplane at Different Angle of Attack. TM 86, April 1922.
- Rota, Augusto: Airplane Stability Calculations and Their Verifications by Flight Tests. TM 115, July 1922.
- Burzio, Filippo: Experimental Researches on the Stability of Airplanes with the Aerodynamic Torque Pendulum. MP 10, Sept. 1922.

- Longitudinal Dynamic Stability (Cont.)
- Norton, F. H. and Carroll, T.: The Effect of Longitudinal Moment of Inertia upon Dynamic Stability. TN 115, Oct. 1922.
- Norton, F. H. and Brown, W. G.: Complete Study of the Longitudinal Oscillation of a VE-7 Airplane. Rept. 162, 1923.
- Norton, F. H.: A Study of Longitudinal Dynamic Stability in Flight. Rept. 170, 1923.
- Wilson, Edwin B.: Dynamic Stability as Affected by the Longitudinal Moment of Inertia. Rept. 172, 1923.
- Fuchs, R. and Hopf, L.: Longitudinal Oscillation of an Airplane. Part I -Problem and Method. TN 188, April 1924.
- Boykow Instrument Co.: The Automatic Aircraft Pilot Circular. MP 23, Aug. 1929.
- Noyes, Richard W.: Pressure Distribution Tests on a Series of Clark Y Biplane Cellules with Special Reference to Stability. Rept. 417, 1932.
- Soulé, Hartley A. and Wheatley, John B.: A Comparison Between the Theoretical and Measured Longitudinal Stability Characteristics of an Airplane. Rept. 442, 1932.
- Haus, Fr.: Automatic Stability of Airplanes. TM 695, Dec. 1932.
- Hubner, Walter: Flight-Test Data on the Static Fore-and-Aft Stability of Various German Airplanes. TM 708, May 1933.
- Zimmerman, Charles H.: An Analysis of Longitudinal Stability in Power-Off Flight with Charts for Use in Design. Rept. 521, 1935.
- Soulé, Hartley A.: Flight Measurements of the Dynamic Longitudinal Stability of Several Airplanes and a Correlation of the Measurements with Pilots' Observations of Handling Characteristics. Rept. 578, 1936.
- Haus, Fr.: Automatic Stabilization. TM 802, Aug. 1936.
- Reed, Warren D. and Clay, William C.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with External-Airfoil Flaps. TN 604, July 1937.
- Klemin, Alexander; Pepper, Perry A. and Wittner, Howard A.: Longitudinal Stability in Relation to the Use of an Automatic Pilot. TN 666, Sept. 1938.

- Schmidt, Rudolf: The Effect of the Masses of the Controls on the Longitudinal Stability with Free Elevator. TM 900, July 1939.
- Donely, Philip; Pierce, Harold B. and Pepoon, Philip W.: Measurements and Analysis of the Motion of a Canard Airplane Model in Gusts. TN 758, April 1940.
- Gilruth, R. R. and White, M. D.: Analysis and Prediction of Longitudinal Stability of Airplanes. Rept. 711, 1941.
- Phillips, William H.: Effect of Spring and Gravity Moments in the Control System on the Longitudinal Stability of the Brewster XSBA-1 Airplane. ARR (WR L-263), April 1942.
- Phillips, William H.: A Flight Investigation of Short-Period Longitudinal Oscillations of an Airplane with Free Elevator. ARR (WR L-444), May 1942.
- Phillips, W. H.: A Flight Investigation of the Stability of a Towed Body (Part I). MR (WR L-559), Oct. 1942.
- Donlan, Charles J.: Some Theoretical Considerations of Longitudinal Stability in Power-On Flight with Special Reference to Wind-Tunnel Testing. ARR (WR L-309), Nov. 1942.
- Phillips, William H.: A Flight Investigation of the Stability of a Towed Body-II. MR (WR L-559), Nov. 1942.
- Jones, Robert T. and Kleckner, Harold F.: Theory and Preliminary Flight Tests of an All-Movable Vertical Tail Surface. ARR (WR L-496), Jan. 1943.
- Campbell, John P. and Hollingworth,
 Thomas A.: The Effect on Stability
 and Control of a Pusher Propeller
 Behind Conventional Tail Surfaces as
 Determined by Tests of a Powered
 Model in the Free-Flight Tunnel. ACR
 (WR L-220), Jan. 1943.
- Pitkin, Marvin and McKinney, Marion O., Jr.: Flight Tests of a Glider Model Towed by Twin Parallel Towlines. RB 3D30 (WR L-498), April 1943.
- Phillips, W. H. and Nissen, J. M.: Flight Tests of Various Tail Modifications on the Brewster XSBA-1 Airplane. I - Measurements of Flying Qualities with Original Tail Surfaces. ARR 3F07 (WR L-412), June 1943.
- Phillips, W. H. and Crane, H. L.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. II Measurements of Flying Qualities with
 Tail Configuration Number Two. MR
 (WR L-598), Dec. 1943.

- Longitudinal Dynamic Stability (Cont.)
- Greenberg, Harry and Sternfield, Leonard: A Theoretical Investigation of Longitudinal Stability of Airplanes with Free Controls Including Effect of Friction in Control System. Rept. 791, 1944.
- Jones, Robert T.: A Method for Studying the Hunting Oscillations of an Airplane with a Simple Type of Automatic Control. Rept. 801, 1944.
- Phillips, W. H.: Stability of a Body Stabilized by Fins and Suspended from an Airplane. ARR L4D18 (WR L-28), April 1944.
- Campbell, John P. and Paulson, John W.:
 The Effects of Static Margin and Rotational Damping in Pitch on the Longitudinal Stability Characteristics of an Airplane as Determined by Tests of a Model in the NACA Free-Flight Tunnel.
 ARR L4F02 (WR L-55), June 1944.
- Crane, H. L. and Reeder, J. P.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. III Measurements of Flying Qualities with
 Tail Configurations 3. MR (WR L-599),
 July 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- Bielat, Ralph P.: Effect of Compressibility on Longitudinal Stability and Control of 1/5.5-Scale Model of Fighter Airplane. ACR L4J02, Oct. 1944.
- Spreiter, John R. and Nissen, James N.: Flight Tests of a Pursuit Airplane Fitted with an Experimental Bellows-Type Bob Weight. MR (WR A-6), Oct. 1944.
- Crane, H. L.; Sjoberg, S. A. and Hoover, H. H.: Measurement of Flying Qualities of a Douglas A-26B Airplane (AAF No. 41-39120). I - Longitudinal Stability and Control Characteristics. MR L4L06 (WR L-605), Dec. 1944.
- White, Roland J. and Klampe, Dean G.: Force and Moment Coefficients for a Thin Airfoil with Flap and Tab in a Form Useful for Stability and Control Calculations. TN 960, Jan. 1945.
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.

- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer No. 04776). I Longitudinal Stability and Control. MR L5B13 (WR L-715), Feb. 1945.
- Kleckner, Harold F.: Preliminary Flight Research on an All-Movable Horizontal Tail as a Longitudinal Control for Flight at High Mach Numbers. ARR L5C08 (WR L-89), March 1945.
- Crane, H. L.; Talmage, D. B. and Gray, W. E., Jr.: Measurement of Flying Qualities of a DeHavilland Mosquito F-8 Airplane (AAF No. 43-334960). II Longitudinal Stability and Control Characteristics. MR L5G11 (WR L-614), July 1945.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Effect of Wing Modifications on the Longitudinal Stability of a Tailless All-Wing Airplane Model. ACR L5G23 (WR L-42), Sept. 1945.
- Johnson, Harold I. and Mungall, Robert G.: Flight Measurements of the Effect on Elevator Stick Forces of Stabilizer Incidence and Elevator Rib Spacing on the P-63A-1-BE Series Airplane. MR L5J09 (WR L-611), Oct. 1945.
- Stone, Ralph W., Jr. and Daughtridge, Lee T., Jr.: Free-Spinning, Longitudinal-Trim, and Tumbling Tests of 1/17.8-Scale Models of Cornelius XFG-1 Glider. MR L5K21 (WR L-738), Jan. 1946.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.
- Hunter, Paul A. and Reeder, John P.: Flight Measurements to Determine Effect of a Spring-Loaded Tab on Longitudinal Stability of an Airplane. ARR L5120 (WR L-210), Feb. 1946.
- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.
- Phillips, William H.: An Investigation of Additional Requirements for Satisfactory Elevator Control Characteristics. TN 1060, June 1946.
- Kleckner, Harold F.: Flight Tests of an All-Movable Horizontal Tail with Geared Unbalancing Tabs on the Curtiss XP-42 Airplane. TN 1139, Oct. 1946.

- Longitudinal Dynamic Stability (Cont.)
- Greenberg, Harry: Frequency-Response Method for Determination of Dynamic Stability Characteristics of Airplanes with Automatic Controls. TN 1229, March 1947.
- Bland, Reginald B. and Reisert, T. D.: An Application of Statistical Data in the Development of Gust-Load Criteria. TN 1268, April 1947.
- Campbell, John P. and Drake, Hubert M.: Investigation of Stability and Control Characteristics of an Airplane Model with Skewed Wing in the Langley Free-Flight Tunnel. TN 1208, May 1947.
- Hanson, Carl M. and Anderson, Seth B.: Flight Tests of a Double-Hinged Horizontal Tail Surface with Reference to Longitudinal-Stability and -Control Characteristics. TN 1224, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Stone, Ralph W., Jr. and Burk, Sanger M., Jr.: Hinge-Moment Characteristics of Balanced Elevator and Rudder for a Specific Tail Configuration on a Fuselage in Spinning Attitudes. TN 1400, Aug. 1947.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Phillips, William H.: Effect of Steady Rolling on Longitudinal and Directional Stability. TN 1627, June 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Mungall, Robert G.: Flight Investigation of a Combined Geared Unbalancing-Tab and Servotab Control System as Used with an All-Movable Horizontal Tail. TN 1763, Dec. 1948.
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.

- Dupleich, Paul: Rotation in Free Fall of Rectangular Wings of Elongated Shape. TM 1201, April 1949.
- Sternfield, Leonard and Gates, Ordway B., Jr.: A Method of Calculating a Stability Boundary That Defines a Region of Satisfactory Period-Damping Relationship of the Oscillatory Mode of Motion. TN 1859, April 1949.
- Reeder, John P. and Haig, Chester R., Jr.: Some Tests of the Longitudinal Stability and Control of an H-13B Helicopter in Forward Flight. RM L9E25a, Aug. 1949.
- Lateral and Directional Dynamic Stability (1.8.1.2.2)
- Wilson, Edwin Bidwell: The Variation of Yawing Moment Due to Rolling. Rept. 26, 1919.
- Hopf, L.: The Danger of Stalled Flight and an Analysis of the Factors Which Govern It. TM 52, Nov. 1921.
- Burzio, Filippo: Experimental Researches on the Stability of Airplanes with the Aerodynamic Torque Pendulum. MP 10, Sept. 1922.
- Norton, F. H.: The Measurement of the Damping in Roll on a JN4H in Flight. Rept. 167, 1923.
- Wood, R. McKinnon: Control of Airplanes at Low Speeds. TM 230, Sept. 1923.
- Crocco, G. Arturo: Inherent Stability of Helicopters. TM 234, Oct. 1923.
- Munk, Max M.: A New Relation Between the Induced Yawing Moment and the Rolling Moment of an Airfoil in Straight Motion. Rept. 197, 1924.
- Carroll, Thomas and McAvoy, William H.: Spiral Tendency in Blind Flying. TN 314, Aug. 1929.
- Boykow Instrument Co.: The Automatic Aircraft Pilot Circular. MP 23, Aug. 1929.
- Knight, Montgomery and Wenzinger, Carl J.: Rolling Moments Due to Rolling and Yaw for Four Wing Models in Rotation. Rept. 379, 1931.
- Lapresle, A.: The Aerodynamic Wind Vane and the Inherent Stability of Airplanes. TM 607, Feb. 1931.
- Kruse, Helmuth: A Study of Curvilinear Flight. TM 615, April 1931.
- Fuchs, Richard and Schmidt, Wilhelm: The Dangerous Sideslip of a Stalled Airplane and Its Prevention. TM 638, Sept. 1931.

- Lateral and Directional Dynamic Stability (Cont.)
- Weick, Fred E. and Wenzinger, Carl J.: Effect of Length of Handley Page Tip Slots on the Lateral-Stability Factor, Damping in Roll. TN 423, July 1932.
- Haus, F.: Automatic Stability of Airplanes. TM 695, Dec. 1932.
- Weick, Fred E.; Soulé, Hartley A. and Gough, Melvin N.: A Flight Investigation of the Lateral Control Characteristics of Short Wide Ailerons and Various Spoilers with Different Amounts of Wing Dihedral. Rept. 494, 1934.
- Mathias, Gotthold: The Calculation of Lateral Stability with Free Controls. TM 741, April 1934.
- Mathias, Gotthold: Supplemental Data and Calculations of the Lateral Stability of Airplanes. TM 742, April 1934.
- Weick, Fred E. and Jones, Robert T.:
 The Effect of Lateral Controls in Producing Motion of an Airplane as Computed from Wind-Tunnel Data. Rept. 570, 1936.
- Jones, Robert T.: A Study of the Two-Control Operation of an Airplane. Rept. 579, 1936.
- Haus, Fr.: Automatic Stabilization. TM 802, Aug. 1936.
- Zimmerman, Charles H.: An Analysis of Lateral Stability in Power-Off Flight with Charts for Use in Design. Rept. 589, 1937.
- Reed, Warren D. and Clay, William C.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with External-Airfoil Flaps. TN 604, July 1937.
- Klemin, Alexander: Motion of the Two-Control Airplane in Rectilinear Flight AfterInitial Disturbances with Introduction of Controls Following an Exponential Law. TN 615, Sept. 1937.
- Jones, Robert T.: The Influence of Lateral Stability on Disturbed Motions of an Airplane with Special Reference to the Motions Produced by Gusts. Rept. 638, 1938.
- Imlay, Frederick H.: The Theoretical Lateral Motions of an Automatically Controlled Airplane Subjected to a Yawing-Moment Disturbance. TN 809, June 1941.

- Bamber, Millard J.: Effect of Some Present-Day Airplane Design Trends on Requirements for Lateral Stability. TN 814, June 1941.
- Fehlner, Leo F.: A Study of the Effects of Vertical Tail Area and Dihedral on the Lateral Maneuverability of an Airplane. ARR (WR L-347), Oct. 1941.
- Bailey, F. J., Jr. and O'Sullivan, William J.: A Theoretical Analysis of the Effect of Aileron Inertia and Hinge Moment on the Maximum Rolling Acceleration of Airplanes in Abrupt Aileron Rolls. ARR (WR L-302), Feb. 1942.
- Fehlner, Leo F.: A Study of the Effect of Adverse Yawing Moment on Lateral Maneuverability at a High Lift Coefficient. ARR (WR L-465), Sept. 1942.
- Clousing, Lawrence A. and McAvoy,
 William H.: Flight Measurements of
 the Lateral-Control Characteristics of
 an Airplane Equipped with a Combination Aileron-Spoiler Control System.
 MR (WR A-68), Sept. 1942.
- Campbell, John P.: Free-Flight Tunnel Investigation of the Effect of Full-Span Flaps on Lateral Stability and Control. ARR, Oct. 1942.
- Phillips, W. H.: A Flight Investigation of the Stability of a Towed Body. MR (WR L-559), Oct. 1942.
- Johnson, Harold I. and Vensel, Joseph R.: Flight Measurements of the Rudder Control and Sideslip Characteristics of Four Vertical Tail Arrangements on the P-40 Series Airplanes. MR (WR L-547), Oct. 1942.
- Bamber, M. J.: Effect of Changes in Aspect Ratio, Side Area, Flight-Path Angle, and Normal Acceleration on Lateral Stability. ARR (WR L-403), Dec. 1942.
- Multhropp, H.: Aerodynamics of the Fuselage. TM 1036, Dec. 1942.
- Greenberg, Harry and Sternfield, Leonard: A Theoretical Investigation of the Lateral Oscillations of an Airplane with Free Rudder with Special Reference to the Effect of Friction. Rept. 762, 1943.
- Campbell, John P. and Seacord, Charles L., Jr.: The Effect of Mass Distribution on the Lateral Stability and Control Characteristics of an Airplane as Determined by Tests of a Model in the Free-Flight Tunnel. Rept. 769, 1943.

- Lateral and Directional Dynamic Stability (Cont.)
- Turner, William N. and Adams, Betty:
 Flight Measurements of the Effects of
 a Wing Leading-Edge Slot and Other
 Modifications on the Stability, Maximum Lift, and High Speed of an Observation Airplane. MR (WR A-88), Jan.
 1943.
- Shortal, Joseph A. and Draper, John W.:
 Free-Flight-Tunnel Investigation of
 the Effect of the Fuselage Length and
 the Aspect Ratio and Size of the Vertical Tail on Lateral Stability and Control. ARR 3D17 (WR L-487), April
 1943.
- Pitkin, Marvin and McKinney, Marion O., Jr.: Flight Tests of a Glider Model Towed by Twin Parallel Towlines. RB 3D30 (WR L-498), April 1943.
- Campbell, John P. and Mathews, Ward O.: Experimental Determination of the Yawing Moment Due to Yawing Contributed by the Wing, Fuselage, and Vertical Tail of a Midwing Airplane Model. ARR 3F28 (WR L-387), June 1943.
- Campbell, John P. and Seacord, Charles L., Jr.: Effect of Wing Loading and Altitude on Lateral Stability and Control Characteristics of an Airplane as Determined by Tests of a Model in the Free-Flight Tunnel. ARR 3F25 (WR L-522), June 1943.
- Phillips, W. H. and Nissen, J. M.: Flight Tests of Various Tail Modifications on the Brewster XSBA-1 Airplane. I -Measurements of Flying Qualities with Original Tail Surfaces. ARR 3F07 (WR L-412), June 1943.
- Kleckner, Harold F.: Flight Tests of an All-Movable Vertical Tail on the Fairchild XR2K-1 Airplane. ACR 3F26 (WR L-397), June 1943.
- Turner, William N. and Adams, Betty: Flight Measurements of the Effect of Various Amounts of Aileron Droop on the Low-Speed Lateral-Control Characteristics of an Observation Airplane. MR (WR A-79), Aug. 1943.
- Pitkin, Marvin and McKinney, Marion O., Jr.: Theoretical Analysis of the Lateral Stability of a Glider Towed by Twin Parallel Towlines. ARR 3K17 (WR L-372), Nov. 1943.
- Phillips, W. H. and Crane, H. L.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. II Measurements of Flying Qualities
 with Tail Configuration Number Two.
 MR (WR L-598), Dec. 1943.

- Spahr, J. Richard and Christopherson, Don R.: Measurements in Flight of the Stability, Lateral-Control, and Stalling Characteristics of an Airplane Equipped with Full-Span Zap Flaps and Spoiler-Type Ailerons. MR (WR A-28), Dec. 1943.
- Jones, Robert T.: A Method for Studying the Hunting Oscillations of an Airplane with a Simple Type of Automatic Control. Rept. 801, 1944.
- Cohen, Doris: A Theoretical Investigation of the Rolling Oscillations of an Airplane with Ailerons Free. Rept. 787, 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Effects of Propeller Operation and Angle of Yaw on the Distribution of the Load on the Horizontal Tail Surface of a Typical Pursuit Airplane. ARR 4B10 (WR L-227), Feb. 1944.
- Phillips, W. H.: Stability of a Body Stabilized by Fins and Suspended from an Airplane. ARR L4D18 (WR L-28), April 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- McKinney, Marion O., Jr. and Maggin, Bernard: Experimental Verification of the Rudder-Free Stability Theory for an Airplane Model Equipped with Rudders Having Negative Floating Tendency and Negligible Friction. ARR L4J05a (WR L-184), Nov. 1944.
- White, Roland J. and Klampe, Dean G.:
 Force and Moment Coefficients for a
 Thin Airfoil with Flap and Tab in a
 Form Useful for Stability and Control
 Calculations. TN 960, Jan. 1945.
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.
- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer 04776). II. Lateral and Directional Stability and Control. MR L5B13a (WR L-716), Feb. 1945.
- Crane, H. L.; Talmage, D. B. and Gray, W. E., Jr.: Measurement of Flying Qualities of a DeHavilland Mosquito F-8 Airplane (AAF No. 43-334960). I Lateral and Directional Stability and Control Characteristics. MR L5D19 (WR L-593), May 1945.

- Lateral and Directional Dynamic Stability (Cont.)
- Wolowicz, Chester H.: Prediction of Motions of an Airplane Resulting from Abrupt Movement of Lateral or Directional Controls. ARR L5E02 (WR L-125), May 1945.
- Ribner, Herbert S.: Attainment of a Straight-Line Trajectory for a Preset Guided Missile with Special Reference to Effect of Wind or Target Motion. MR L5H21b (WR L-590), Aug. 1945.
- McKinney, Marion O., Jr.: Experimental Determination of the Effect of Negative Dihedral on Lateral Stability and Control Characteristics at High Lift Coefficients. ARR L5J02 (WR L-54), Jan. 1946.
- Drake, Hubert M.: The Effect of Lateral Area on the Lateral Stability and Control Characteristics of an Airplane as Determined by Tests of a Model in the Langley Free-Flight Tunnel. ARR L5L05 (WR L-103), Feb. 1946.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.
- Bishop, Robert C. and Lomax, Harvard: A Simplified Method for Determining from Flight Data the Rate of Change of Yawing - Moment Coefficient with Sideslip. TN 1076, June 1946.
- Ankenbruck, Herman O.: Effects of Tip Dihedral on Lateral Stability and Control Characteristics as Determined by Tests of a Dynamic Model in the Langley Free-Flight Tunnel. TN 1059, July 1946.
- McKinney, Marion O., Jr.: Experimental Determination of the Effects of Dihedral, Vertical-Tail Area, and Lift Coefficient on Lateral Stability and Control Characteristics. TN 1094, July 1946.
- Drake, Hubert M.: Experimental Determination of the Effects of Directional Stability and Rotary Damping in Yaw on Lateral Stability and Control Characteristics. TN 1104, July 1946.
- Mungall, Robert G.: Flight Measurements of the Directional Stability and Control of a P-51D Airplane with a Horn-Balanced Rudder as Compared with Previously Tested Vertical-Tail Configurations. RM L6J25, Dec. 1946.

- Harper, Charles W. and Jones, Arthur L.: A Comparison of the Lateral Motion Calculated for Tailless and Conventional Airplanes. TN 1154, Feb. 1947.
- Malvestuto, Frank S., Jr. and Gale, Lawrence J.: Formulas for Additional Mass Corrections to the Moments of Inertia of Airplanes. TN 1187, Feb. 1947.
- Sternfield, Leonard: Effect of Product of Inertia on Lateral Stability. TN 1193, March 1947.
- Greenberg, Harry: Frequency-Response Method for Determination of Dynamic Stability Characteristics of Airplanes with Automatic Controls. TN 1229, March 1947.
- White, Maurice D.; Lomax, Harvard and Turner, Howard L.: Sideslip Angles and Vertical-Tail Loads in Rolling Pull-Out Maneuvers. TN 1122, April 1947.
- Campbell, John P. and Drake, Hubert M.: Investigation of Stability and Control Characteristics of an Airplane Model with Skewed Wing in the Langley Free-Flight Tunnel. TN 1208, May 1947.
- Sternfield, Leonard: Some Considerations of the Lateral Stability of High-Speed Aircraft. TN 1282, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Maggin, Bernard: Experimental Verification of the Rudder-Free Stability
 Theory for an Airplane Model Equipped with a Rudder Having Positive Floating Tendencies and Various Amounts of Friction. TN 1359, July 1947.
- McKinney, Marion O., Jr. and Drake, Hubert M.: Correlation of Experimental and Calculated Effects of Product of Inertia on Lateral Stability. TN 1370, July 1947.
- Stone, Ralph W., Jr. and Klinar, Walter J.: The Influence of Very Heavy Fuselage Mass Loadings and Long Nose Lengths upon Oscillations in the Spin. TN 1510, Jan. 1948.

- Lateral and Directional Dynamic Stability (Cont.)
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a
 35° Sweptback Wing with 40-PercentSpan Slots and a Comparison with
 Wind-Tunnel Data. TN 1511, Jan. 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Phillips, William H.: Effect of Steady Rolling on Longitudinal and Directional Stability. TN 1627, June 1948.
- Smith, Charles C., Jr.: The Effects of Fuel Sloshing on the Lateral Stability of a Free-Flying Airplane Model. RM L8C16, June 1948.
- McKinney, Marion O., Jr. and Shanks, Robert E.: Lateral Stability and Control Characteristics of a Free-Flying Model Having an Unswept Wing with an Aspect Ratio of 2. TN 1658, July 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Johnson, Joseph L. and Sternfield, Leonard: A Theoretical Investigation of the Effect of Yawing Moment due to Rolling on Lateral Oscillatory Stability. TN 1723, Oct. 1948.
- Sternfield, Leonard and Gates, Ordway B., Jr.: A Simplified Method for the Determination and Analysis of the Neutral-Lateral-Oscillatory-Stability Boundary. TN 1727, Oct. 1948.
- Maggin, Bernard and Shanks, Robert E.:
 Experimental Determination of the
 Lateral Stability of a Glider Towed by
 a Single Towline and Correlation with
 an Approximate Theory. RM L8H23,
 Nov. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Stability, Control,
 and Stalling Characteristics of an
 Airplane Having a 35° Sweptback Wing
 Without Slots and with 80-PercentSpan Slots and a Comparison with
 Wind-Tunnel Data. TN 1743, Nov.
 1948.
- Kauffman, William M.; Smith, Allan; Liddell, Charles J., Jr. and Cooper, George E.: Flight Tests of an Apparatus for Varying Dihedral Effect in Flight. TN 1788, Dec. 1948.

- Sternfield, Leonard: Effect of Automatic Stabilization on the Lateral Oscillatory Stability of a Hypothetical Airplane at Supersonic Speeds. TN 1818, March 1949.
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.
- Sternfield, Leonard and Gates, Ordway B., Jr.: A Method of Calculating a Stability Boundary That Defines a Region of Satisfactory Period-Damping Relationship of the Oscillatory Mode of Motion. TN 1859, April 1949.
- Goodman, Alex and Adair, Glenn H.:
 Estimation of the Damping in Roll of
 Wings Through the Normal Flight
 Range of Lift Coefficient. TN 1924,
 July 1949.
- Liddell, Charles J., Jr.; Van Dyke, Rudolph D., Jr. and Heinle, Donovan R.: A Flight Determination of the Tolerable Range of Effective Dihedral on a Conventional Fighter Airplane. TN 1936, Aug. 1949.

Damping Derivatives (1.8.1.2.3)

- Chu, Lynn: Damping Coefficients Due to Tail Surfaces in Aircraft. Rept. 136, 1922.
- Norton, F. H.: The Measurement of the Damping in Roll on a JN4H in Flight. Rept. 167, 1923.
- Shoemaker, James M. and Lee, John G.: Preliminary Study of the Damping Factor in Roll. TN 161, Oct. 1923.
- Munk, Max M.: A New Relation Between the Induced Yawing Moment and the Rolling Moment of an Airfoil in Straight Motion. Rept. 197, 1924.
- Scarborough, James B.: Some Problems on the Lift and Rolling Moment of Airplane Wings. Rept. 200, 1925.
- Ober, Shatswell: Some Experiments on Autorotation of an Airfoil. TN 319, Sept. 1929.
- Wenzinger, Carl J. and Harris, Thomas A.: The Vertical Wind Tunnel of the National Advisory Committee for Aeronautics. Rept. 387, 1931.
- Bamber, M. J. and Zimmerman, C. H.: The Aerodynamic Forces and Moments Exerted on a Spinning Model of the "NY-1" Airplane as Measured by the Spinning Balance. Rept. 456, 1933.

- Damping Derivatives Stability (Cont.)
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. IX Tapered
 Wings with Ordinary Ailerons. TN 449,
 Feb. 1933.
- Weick, Fred E. and Noyes, Richard W.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. X Various
 Control Devices on a Wing with a
 Fixed Auxiliary Airforce. TN 451,
 March 1933.
- Weick, Fred E. and Harris, Thomas A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. XI Various
 Floating Tip Ailerons on Both Rectangular and Tapered Wings. TN 458,
 May 1933.
- Shortal, Joseph A.: Effect of Tip Shape and Dihedral on Lateral-Stability Characteristics. Rept. 548, 1935.
- Weick, Fred E. and Jones, Robert T.: The Effect of Lateral Controls in Producing Motion of an Airplane as Computed from Wind-Tunnel Data. Rept. 570, 1936.
- Zimmerman, Charles H.: An Analysis of Lateral Stability in Power-Off Flight with Charts for Use in Design. Rept. 589, 1937.
- Gourjienko, G. A.: Method of Curved Models and Its Application to the Study of Curvilinear Flight of Airships - I. TM 829, June 1937.
- Gourjienko, G. A.: Method of Curved Models and Its Application to the Study of Curvilinear Flight of Airships - II. TM 830, June 1937.
- Bader, W.: Measurements on a Low-Wing Model in the Rotating Jet and Comparison with Flight Measurements. TM 910, Sept. 1939.
- Rogallo, F. M. and Purser, Paul E.:
 Wind-Tunnel Investigation of a Plain
 Aileron with Various Trailing-Edge
 Modifications on a Tapered Wing II Ailerons with Thickened and Beveled
 Trailing Edges. ARR (WR L-228),
 Oct. 1942.
- Campbell, John P. and Mathews, Ward O.:
 Experimental Determination of the
 Yawing Moment Due to Yawing Contributed by the Wing, Fuselage, and
 Vertical Tail of a Midwing Airplane
 Model. ARR 3F28 (WR L-387), June
 1943.

- Harmon, Sidney M.: Determination of the Damping Moment in Yawing for Tapered Wings with Partial-Span Flaps. ARR 3H25 (WR L-395), Aug. 1943.
- Cohen, Doris: A Theoretical Investigation of the Rolling Oscillations of an Airplane with Ailerons Free. Rept. 787, 1944.
- Campbell, John P. and Paulson, John W.:
 The Effects of Static Margin and Rotational Damping in Pitch on the
 Longitudinal Stability Characteristics
 of an Airplane as Determined by Tests
 of a Model in the NACA Free-Flight
 Tunnel. ARR L4F02 (WR L-55), June
 1944.
- McKinney, Marion O., Jr. and Maggin, Bernard: Experimental Verification of the Rudder-Free Stability Theory for an Airplane Model Equipped with Rudders Having Negative Floating Tendency and Negligible Friction. ARR L4J05a (WR L-184), Nov. 1944.
- Swanson, Robert S. and Priddy, E. LaVerne: Lifting-Surface-Theory Values of the Damping in Roll and of the Parameter Used in Estimating Aileron Stick Forces. ARR L5F23 (WR L-53), Aug. 1945.
- Cotter, William E., Jr.: Summary and Analysis of Data on Damping in Yaw and Pitch for a Number of Airplane Models. TN 1080, May 1946.
- Bishop, Robert C. and Lomax, Harvard L.:
 A Simplified Method for Determining from Flight Data the Rate of Change of Yawing-Moment Coefficient with Sideslip. TN 1076, June 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Campbell, John P. and Drake, Hubert M.: Investigation of Stability and Control Characteristics of an Airplane Model with Skewed Wing in the Langley Free-Flight Tunnel. TN 1208, May 1947.
- Bennett, Charles V. and Johnson, Joseph L.: Experimental Determination of the Damping in Roll and Aileron Rolling Effectiveness of Three Wings Having 2°, 42°, and 62° Sweepback. TN 1278, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Low-Speed Stability and Damping-in-Roll Characteristics of Some Highly Swept Wings. TN 1286, May 1947.

- Damping Derivatives Stability (Cont.)
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- MacLachlan, Robert and Letko, William: Correlation of Two Experimental Methods of Determining the Rolling Characteristics of Unswept Wings. TN 1309, May 1947.
- Murray, Harry E. and Wells, Evalyn G.: Wind-Tunnel Investigation of the Effect of Wing-Tip Fuel Tanks on Characteristics of Unswept Wings in Steady Roll. TN 1317, June 1947.
- Ribner, Herbert S.: The Stability Derivatives of Low-Aspect-Ratio Triangular Wings at Subsonic and Supersonic Speeds. TN 1423, Sept. 1947.
- Tosti, Louis P.: Low-Speed Static Stability and Damping-in-Roll Characteristics of Some Swept and Unswept Low-Aspect-Ratio Wings. TN 1468, Oct. 1947.
- Heaslet, Max. A. and Lomax, Harvard: The Use of Source-Sink and Doublet Distributions Extended to the Solution of Arbitrary Boundary Value Problems in Supersonic Flow. TN 1515, Jan. 1948.
- Jones, Arthur L. and Alksne, Alberta: The Damping Due to Roll of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1548, March 1948.
- Brown, Clinton E. and Adams, Mac C.: Damping in Pitch and Roll of Triangular Wings at Supersonic Speeds. TN 1566, April 1948.
- Ribner, Herbert S. and Malvestuto, Frank S., Jr.: Stability Derivatives of Triangular Wings at Supersonic Speeds. TN 1572, May 1948.
- Toll, Thomas A. and Queijo, M. J.: Approximate Relations and Charts for Low-Speed Stability Derivatives of Swept Wings. TN 1581, May 1948.
- Letko, William and Cowan, John W.: Effect of Taper Ratio on Low-Speed Static and Yawing Stability Derivatives of 45° Sweptback Wings with Aspect Ratio of 2.61. TN 1671, July 1948.

- Goodman, Alex and Brewer, Jack D.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Static and Yawing Stability Derivatives of Untapered Wings. TN 1669, Aug. 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Moeckel, W. E. and Evvard, J. C.: Load Distributions Due to Steady Roll and Pitch for Thin Wings at Supersonic Speeds. TN 1689, Aug. 1948.
- Queijo, M. J. and Jaquet, Byron M.: Investigation of Effects of Geometric Dihedral on Low-Speed Static Stability and Yawing Characteristics of an Untapered 45° Sweptback-Wing Model of Aspect Ratio 2.61. TN 1668, Sept. 1948.
- Jones, Arthur L.; Spreiter, John R. and Alksne, Alberta: The Rolling Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1700, Sept. 1948.
- Johnson, Joseph L. and Sternfield, Leonard: A Theoretical Investigation of the Effect of Yawing Moment Due to Rolling on Lateral Oscillatory Stability. TN 1723, Oct. 1948.
- Queijo, M. J. and Jaquet, Byron M.: Calculated Effects of Geometric Dihedral on the Low-Speed Rolling Derivatives of Swept Wings. TN 1732, Oct. 1948.
- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.
- Malvestuto, Frank S., Jr. and Margolis, Kenneth: Theoretical Stability Derivatives of Thin Sweptback Wings Tapered to a Point with Sweptback or Sweptforward Trailing Edges for a Limited Range of Supersonic Speeds. TN 1761, Jan. 1949.
- Goodman, Alex and Fisher, Lewis R.: Investigation at Low Speeds of the Effect of Aspect Ratio and Sweep on Rolling Stability Derivatives of Untapered Wings. TN 1835, March 1949.
- Bird, John D.: Some Theoretical Low-Speed Span Loading Characteristics of Swept Wings in Roll and Sideslip. TN 1839, March 1949.
- Jones, Arthur L. and Alksne, Alberta: The Yawing Moment Due to Sideslip of Triangular, Trapezoidal, and Related Plan Forms in Supersonic Flow. TN 1850, April 1949.

- Damping Derivatives Stability (Cont.)
- Fisher, Lewis R.: Approximate Corrections for the Effects of Compressibility on the Subsonic Stability Derivatives of Swept Wings. TN 1854, April 1949.
- Polhamus, Edward C.: A Simple Method of Estimating the Subsonic Lift and Damping in Roll of Sweptback Wings. TN 1862, April 1949.
- Carpenter, Paul J. and Peitzer, Herbert E.: Response of a Helicopter Rotor to Oscillatory Pitch and Throttle Movements. TN 1888, June 1949.
- Diederich, Franklin W.: Calculation of the Aerodynamic Loading of Flexible Wings of Arbitrary Plan Form and Stiffness. TN 1876, April 1949.
- Malvestuto, Frank S., Jr.; Margolis, Kenneth and Ribner, Herbert S.: Theoretical Lift and Damping in Roll of Thin Sweptback Wings of Arbitrary Taper and Sweep at Supersonic Speeds. Subsonic Leading Edges and Supersonic Trailing Edges. TN 1860, April 1949.
- Tucker, Warren A. and Nelson, Robert L.: The Effect of Torsional Flexibility on the Rolling Characteristics at Supersonic Speeds of Tapered Unswept Wings. TN 1890, June 1949.
- Goodman, Alex and Adair, Glenn H.:
 Estimation of the Damping in Roll of
 Wings Through the Normal Flight
 Range of Lift Coefficient. TN 1924,
 July 1949.

CONTROL

(1.8.2)

- Carroll, Thomas: The Elimination of Dead Center in the Controls of Airplanes with Thick Sections. TN 119, Nov. 1922.
- Lesage, M. Andre: Magnan Glider. TM 250, Feb. 1924.
- Warner, Edward P.: The Controls of an Airplane. TM 215, June 1923.
- Warner, Edward P.: Control Operating Mechanisms for Airplanes. TM 217, July 1923.
- Warner, Edward P.: Control Problems on Large Airplanes. TM 219, July 1923.
- Smith, R. H.: Lift, Drag, and Elevator Hinge Moments of Handley-Page Control Surfaces. Rept. 278, 1927.
- Seiferth, R.: Experiments with Three Horizontal Empennages. TM 419, July 1927.

- Anon.: Balanced and Servo Control Surfaces. The Aeroplane, Feb 26, 1930. TM 563, May 1930.
- Hertel, Heinrich: Determination of the Maximum Control Forces and Attainable Quickness in the Operation of Airplane Controls. TM 583, Sept. 1930.
- Jones, Robert T.: A Simplified Application of the Method of Operators to the Calculation of Disturbed Motions of an Airplane. Rept. 560, 1936.
- Gough, M. N. and Beard, A. P.: Limitations of the Pilot in Applying Forces to Airplane Controls. TN 550, Jan. 1936.
- De Lajarte, A. Dufaure: Chief Characteristics and Advantages of Tailless Airplanes. TM 794, May 1936.
- Haus, Fr.: Theoretical Study of Various Airplane Motions After Initial Disturbance. TM 867, June 1938.
- Stuper, J.: Effect of Propeller Slipstream of Wing and Tail. TM 874, Aug. 1938.
- Oppelt, W.: Comparison of Automatic Control Systems. TM 966, Feb. 1941.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics.
 I Effect of Gap on the Aerodynamic Characteristics of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap. ARR (WR L-377), June 1941.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. II A Large Aerodynamic Balance of Various Nose Shapes with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-380), Aug. 1941.
- Jones, Robert T.: Notes on the Stability and Control of Tailless Airplanes. TN 837, Dec. 1941.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. IX Some Analytical Considerations and Experimental Test Results for an Internally Balanced Flap. ARR (WR L-339), July 1942.
- Sears, Richard I. and Gillis, Clarence L.:
 Wind-Tunnel Investigation of Control
 Surface Characteristics. VIII A
 Large Aerodynamic Balance of Two
 Nose Shapes Used with a 30-PercentChord Flap on an NACA 0015 Airfoil.
 ARR (WR L-378), July 1942.

Control (Cont.)

- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. VII - A Medium Aerodynamic Balance of Two Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0015 Airfoil. ARR (WR L-448), July 1942.
- Recant, Isidore G. and Swanson, Robert S.: Determination of the Stability and Control Characteristics of Airplanes from Tests of Powered Models. ARR, July 1942.
- Kamm, Robert W.: The Effect of Spanwise Mass Distribution upon the Spin Characteristics of Airplanes as Determined by Model Tests Conducted in the Free-Spinning Wind Tunnel. ARR (WR L-351), Aug. 1942.
- Neihouse, A. I.: A Mass-Distribution Criterion for Predicting the Effect of Control Manipulation on the Recovery from a Spin. ARR (WR L-168), Aug. 1942.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. X A 30-Percent-Chord Plain Flap with Straight Contour on the NACA 0015 Airfoil. ARR (WR L-366), Sept. 1942.
- Langley Memorial Aeronautical Laboratory: British Drawings of "G" Restrictors and Control Booster. CB, Oct. 1942.
- Phillips, W. H.: Effect of Fabric Deflection on Control Characteristics. RB, March 1943.
- Purser, Paul E. and Gillis, Clarence L.:
 Preliminary Correlation of the Effects
 of Beveled Trailing Edges on the
 Hinge-Moment Characteristics of
 Control Surfaces. CB 3E14, May 1943.
- Goett, Harry J.; Jackson, Roy P. and Belsley, Steven E.: Wind-Tunnel Procedure for Determination of Critical Stability and Control Characteristics of Airplanes. Rept. 781, 1944.
- Beeler, De E.: Maximum Rates of Control Motion Obtained from Ground Tests. RB L4E31 (WR L-100), May 1944.
- Davis, Wallace F. and Brown, Sherwood H.: Wind-Tunnel Investigation of the Effect of Jet-Motor Operation on Stability. MR (WR A-31), July 1944.
- Garner, I. Elizabeth: Wind-Tunnel Investigation of Control-Surface Characteristics. XX Plain and Balanced Flaps on an NACA 0009 Rectangular Semispan Tail Surface. ARR L4I11f (WR L-186), Oct. 1944.

- Weiberg, James A. and Schnurbusch, Alfred W.: Flying Qualities of a Bomber Airplane with Engines in the Fuselage as Estimated from Tests of a 1/8-Scale Powered Model. MR A4K04 (WR A-78), Nov. 1944.
- Crane, Harold L. and Sjoberg, Sigurd A.: Comparison of Predicted and Actual Control-Fixed Stability and Control Characteristics of a Douglas A-26B Airplane. MR L5D06 (WR L-608), April 1945.
- Stevens, Victor I., Jr.; McCullough, George B. and Hanson, Frederick H.: An Experimental Investigation of the Effect of Propellers Used as Aerodynamic Brakes on Stability and Control. ARR 5C01 (WR A-19), July 1945.
- Daum, Fred L. and Sawyer, Richard H.:
 Tests at Transonic Speeds of the
 Effectiveness of a Swept-Back TrailingEdge Flap on an Airfoil Having Parallel Flat Surfaces, Extreme Sweepback, and Low Aspect Ratio. CB
 L5H01, Sept. 1945.
- Johnson, Harold I.: An Approximate Determination of the Power Required to Move Control Surfaces as Related to Control-Booster Design. RB L5F27 (WR L-102), Sept. 1945.
- Weiberg, James A. and Schnurbusch, Alfred W.: Aerodynamic Characteristics of a 1/8-Scale Powered Model of a Bomber Airplane with Engines in the Fuselage. MR A5J12 (WR A-89), Oct. 1945.
- Klinar, Walter J. and Snyder, Thomas L.: Influence of Tail Length upon the Spin-Recovery Characteristics of a Trainer-Type-Airplane Model. TN 1764, Dec. 1948.
- Klinar, Walter J. and Gale, Lawrence J.:
 Wind-Tunnel Investigation of the Spinning Characteristics of a Model of a
 Twin-Tail Low-Wing Personal-OwnerType Airplane with Linked and Unlinked
 Rudder and Aileron Controls. TN
 1801, Jan. 1949.

LONGITUDINAL CONTROL (1.8.2.1)

- Raymond, Arthur E.: Ground Influence on Aerofoils. TN 67, Dec. 1921.
- Munk, Max A.: The Tail Plane. Rept. 133, 1922.
- Munk, Max M.: General Theory of Thin Wing Sections. Rept. 142, 1922.
- Reid, Elliott G.: The Effects of Shielding the Tips of Airfoils. Rept. 201, 1925.

- Longitudinal Control (Cont.)
- Tiltman, A. Hessell: Flap Gear for Airplanes A New Scheme in Which Variation is Automatic. TM 406, April 1927.
- Betz, A.: Experiments on Airfoils with Aileron and Slot. TM 437, Nov. 1927.
- Diehl, Walter S.: Two Practical Methods for the Calculation of the Horizontal Tail Area Necessary for a Statically Stable Airplane. Rept. 293, 1928.
- Dronin, Paul V.; Ramsden, Earl I. and Higgins, George J.: The Effect of Tip Shields on a Horizontal Tail Surface. TN 295, Aug. 1928.
- Breguet, Louis: Landing and Braking of Airplanes. TM 507, April 1929.
- Hübner, W.: Information Obtained from Airplane Flight Tests in the Year 1927-1928. TM 535, Oct. 1929.
- Monish, B. H.: Effect of Variation of Chord and Span of Ailerons on Hinge Moments at Several Angles of Pitch. Rept. 370, 1930.
- Pris, M.: The Controls at Low Hinge Moments. TM 685, Sept. 1932.
- Hübner, Walter: The Effect of a Gap Between Elevator and Stabilizer on the Static Stability and Maneuverability About the Lateral Axis in Flight. TM 701, March 1933.
- Biechteler, Curt: Influence of Cut-Outs in Elevator on the Static Longitudinal Stability and on the Static Elevator Effect. TM 750, Aug. 1934.
- Hubner, Walter: Additional Test Data on Static Longitudinal Stability. TM 752, Aug. 1934.
- Silverstein, Abe and White, James A.:
 Wind-Tunnel Interference with Particular Reference to Off-Center
 Positions of the Wing and to the Downwash at the Tail. Rept. 547, 1935.
- Soulé, H. A.: Flight Tests of a Balanced Split Flap with Particular Reference to Rapid Operation. TN 548, Dec. 1935.
- Weick, Fred E.: Wind-Tunnel Tests of Wing Flaps Suitable for Direct Control of Glide-Path Angle. TN 552, Jan. 1936.
- Lotz, Irmgard: Correction of Downwash in Wind Tunnels of Circular and Elliptic Sections. TM 801, July 1936.

- Pearson, H. A.: Pressure-Distribution Measurements on an O-2H Airplane in Flight. Rept. 590, 1937.
- Silverstein, Abe and Katzoff, S.: Experimental Investigation of Wind-Tunnel Interference on the Downwash Behind an Airfoil. Rept. 609, 1937.
- Reed, Warren D. and Clay, William C.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with External-Airfoil Flaps. TN 604, July 1937.
- Schrenk, M.: Static Longitudinal Stability and Longitudinal Control of Autogiro Rotors. TM 879, Oct. 1938.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Martinov, A. and Kolosov E.: Some Data on the Static Longitudinal Stability and Control of Airplanes (Design of Control Surfaces). TM 941, May 1940.
- Gilruth, R. R. and White, M. D.: Analysis and Prediction of Longitudinal Stability of Airplanes. Rept. 711, 1941.
- Ames, Milton B., Jr. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of a Section of the Horizontal Tail Surface for the Bell XP-63 Airplane. MR (WR L-573), Aug. 1941.
- Lowry, John G.: Power-On Wind-Tunnel Tests of the 1/8-Scale Model of the Brewster F2A Airplane with Full-Span Slotted Flaps. MR (WR L-707), Aug. 1941.
- Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. III A Small Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-301), Aug. 1941.
- Recant, I. G.: Plate Method of Ground Representation for Wind-Tunnel Determination of Elevator Effectiveness in Landing. TN 823, Sept. 1941.
- Ames, Milton B., Jr. and Eastman, Donald R., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. IV A Medium Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-355), Sept. 1941.
- Vensel, Joseph R.: Flight Measurements of the Elevator Deflections Used in Landings of Several Airplanes. ARR (WR L-248), Nov. 1941.

- Longitudinal Control (Cont.)
- Jones, Robert T. and Cohen, Doris: Determination of Optimum Planforms for Control Surfaces. Rept. 731, 1942.
- Jones, Robert T. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. V - The Use of a Beveled Trailing Edge to Reduce the Hinge Moment of a Control Surface. ARR (WR L-464), March 1942.
- Lowry, John G. and Toll, Thomas A.:
 Power-On Longitudinal-Stability and
 Control Tests of the 1/8-Scale Model
 of the Brewster F2A Airplane Equipped
 with Full-Span Slotted Flaps and a New
 Horizontal Tail. MR (WR L-709),
 March 1942.
- Sears, Richard I.: Calculation of Tab Characteristics for Flight Conditions from Wind-Tunnel Data. RB (WR L-218), April 1942.
- Phillips, William H.: Effect of Spring and Gravity Moments in the Control System on the Longitudinal Stability of the Brewster XSBA-1 Airplane. ARR (WR L-263), April 1942.
- Root, L. E.: The Development of Satisfactory Flying Qualities on the Douglas Dive Bomber, Model SBD-1 Through Flight Testing Successive Modifications in Control-Surface Area, Hinge-Line Location, and Aerodynamic-Balance Nose Shape. ACR (WR W-81), May 1942.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. VI A 30Percent-Chord Plain Flap on the NACA
 0015 Airfoil. ARR (WR L-454),
 June 1942.
- Goranson, R. Fabian: Calculated Effects of Full-Span Slotted and Fowler Flaps on Longitudinal Stability and Control Characteristics for a Typical Fighter-Type Airplane with Various Tail Modifications. ARR (WR L-392), July 1942.
- Pass, H. R.: Wind-Tunnel Study of the Effects of Propeller Operation and Flap Deflection on the Pitching Moments and Elevator Hinge Moments of a Single-Engine Pursuit-Type Airplane. ARR (WR L-411), July 1942.
- Eujen, E.: Prediction of Downwash and Dynamic Pressure at the Tail from Free-Flight Measurements. TM 1021, July 1942.

- Sweberg, Harold H.: The Effect of Propeller Operation on the Air Flow in the Region of the Tail Plane for a Twin-Engine Tractor Monoplane. ARR (WR L-381), Aug. 1942.
- Recant, I. G. and Wallace, A. R.: Effect of Ground on Characteristics of a Model of a Low-Wing Airplane with Full-Span Slotted Flap with and Without Power. ARR (WR L-335), Sept. 1942.
- Erickson, Albert L.: Investigation of Diving Moments of a Pursuit Airplane in the Ames 16-Foot High-Speed Wind Tunnel. MR (WR A-65), Oct. 1942.
- Sivells, James C.: Tests in the 19-Foot Pressure Tunnel of a Rectangular NACA 0012 Horizontal Tail Plane with Plain and Horn-Balanced Elevators. ARR, Oct. 1942.
- Seidman, Oscar and Klinar, J. W.: Elevator Stick Forces in Spins as Computed from Wind-Tunnel Measurements. ARR (WR L-422), Oct. 1942.
- Graham, Robert R. and Ashworth, C. Dixon: Tests in the 19-Foot Pressure Tunnel of a 1/2.75-Scale Model of the F4U-1 Airplane with Several Balanced Elevators Full-Span Flaps, and Dropable Gas Tank. ACR, Oct. 1942.
- Pearson, Henry A. and Smull, Leland K.: Control-Motion Studies of the PBM-3 Flying Boat in Abrupt Pull-Ups. MR (WR L-577), Nov. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Ganzer, Victor M.: High-Speed Wind-Tunnel Tests of a 1/6-Scale Model of a Twin-Engine Pursuit Airplane. MR (WR A-91), Dec. 1942.
- Gillis, Clarence L.: Characteristics of Beveled-Trailing-Edge Elevators on a Typical Pursuit Fuselage at Attitudes Simulating Normal Flight and Spin Conditions. ARR (WR L-391), Dec. 1942.
- Sweberg, Harold H.: Stability and Control Tests of a 3/4-Scale Model of the XP-69 Airplane in the NACA Full-Scale Tunnel. MR (WR L-642), Jan. 1943.

- Longitudinal Control (Cont.)
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XI Various Large Overhang and Internal-Type Aerodynamic Balances for a Straight-Contour Flap on the NACA 0015 Airfoil. ARR (WR L-447), Jan. 1943.
- Jones, Robert T. and Kleckner, Harold F.: Theory and Preliminary Flight Tests of an All-Movable Vertical Tail Surface. ARR (WR L-496), Jan. 1943.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XII Various Cover-Plate Alinements on the NACA 0015 Airfoil with a 30-Percent-Chord Flap and Large Sealed Internal Balance. ARR (WR L-511), Jan. 1943.
- Hamilton, William T.: High-Speed Wind-Tunnel Tests of a 1/14-Scale Model of a Four Engine Transport Airplane. MR (WR A-69), Feb. 1943.
- McKee, John W. and Liddell, Robert B.: Wind-Tunnel Investigation of a Revised Horizontal Tail Surface for the Grumman TBF-1 Airplane. MR (WR L-702), Feb. 1943.
- Laitone, Edmund V.: Investigation of the Longitudinal Stability at High Speeds of a 1/5-Scale Model of a Tailless Pursuit Airplane. MR (WR A-77), March 1943.
- Erickson, Albert L.: Wind-Tunnel Investigation of Devices for Improving the Diving Characteristics of Airplanes. MR 3F12 (WR A-66), April 1943.
- Lowry, John G.: Resume of Hinge-Moment Data for Unshielded Horn-Balanced Control Surfaces. RB 3F19 (WR L-169), June 1943.
- Sears, Richard I. and Purser, Paul E.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XIV NACA
 0009 Airfoil with a 20-percent-chord
 Double Plain Flap. ARR 3F29
 (WR L-290), June 1943.
- Gillis, Clarence L. and Lockwood,
 Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics.
 XIII Various Flap Overhangs Used with a 30-Percent-Chord Flap on an NACA 66-009 Airfoil. ACR 3G20 (WR L-314), July 1943.
- Schuldenfrei, Marvin: Some Notes on the Determination of the Stick-Fixed Neutral Point from Wind-Tunnel Data. RB 3120 (WR L-344), Sept. 1943.

- Phillips, W. H. and Crane, H. L.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. II Measurements of Flying Qualities with
 Tail Configuration Number Two. MR
 (WR L-598), Dec. 1943.
- Sears, Richard I.: Wind-Tunnel Data on the Aerodynamic Characteristics of Airplane Control Surfaces. ACR 3L08 (WR L-663), Dec. 1943.
- Gilruth, R. R. and Liddell, C. J.: Effect of Altitude on Elevator Control Characteristics in Turning Flight as Measured for P-47B and P-47C Airplanes. ACR 3L17, Dec. 1943.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Phillips, William H.: Application of Spring Tabs to Elevator Controls. Rept. 797, 1944.
- Jones, Robert T. and Greenberg, Harry: Effect of Hinge-Moment Parameters on Elevator Stick Forces in Rapid Maneuvers. Rept. 798, 1944.
- Brewer, Gerald W.: Tests of the Northrop MX-334 Glider Airplane in the NACA Full-Scale Tunnel. MR (WR L-628), Jan. 1944.
- Barnes, Robert H.: High-Speed Aerodynamic Characteristics of the XB-29 Airplane as Determined from Tests of a 0.075-Scale Model. MR (WR A-82), Jan. 1944.
- Ganzer, Victor M.: The Effects of a Highly Cambered Low-Drag Wing and of Auxiliary Flaps on the High-Speed Aerodynamic Characteristics of a Twin-Engine Pursuit Airplane Model. MR (WR A-90), Feb. 1944.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XVIII A
 Linked Overhang Aerodynamic Balance.
 ACR 4B28 (WR L-350), Feb. 1944.
- Hoggard, H. Page, Jr. and Bulloch,
 Marjorie E.: Wind-Tunnel Investigation of Control-Surface Characteristics.
 XVI Pressure Distribution over an
 NACA 0009 Airfoil with 0.30-AirfoilChord Beveled-Trailing-Edge Flaps.
 ARR L4D03 (WR L-205), April 1944.
- Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVII Beveled-Trailing-Edge Flaps of 0.20, 0.30, and 0.40 Airfoil Chord on an NACA 0009 Airfoil. ACR L4D12 (WR L-666), April 1944.

- Longitudinal Control (Cont.)
- Stevens, Victor I.; Douglass, William M. and Dods, Jules B., Jr.: Wind-Tunnel Investigation of a 1/20-Scale Powered Model of the Douglas C-74 Airplane. MR (WR A-94), May 1944.
- Purser, Paul E. and Toll, Thomas A.: Analysis of Available Data on Control Surfaces Having Plain-Overhang and Frise Balances. ACR L4E13 (WR L-665), May 1944.
- Mathews, Charles W.: An Analytical Investigation of the Effects of Elevator-Fabric Distortion on the Longitudinal Stability and Control of an Airplane. ACR L4E30 (WR L-142), May 1944.
- Weil, Joseph and Wells, Evalyn G.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. I - Preliminary Investigation of Longitudinal Stability. MR (WR L-667), June 1944.
- Greenberg, Harry: Calculation of Stick Forces for an Elevator with a Spring Tab. RB L4F07 (WR L-129), June 1944.
- Liddell, Robert B.: Wind-Tunnel Investigation of Control-Surface Characteristics. XIX - A Double Flap with an Overhang and an Internal Aerodynamic Balance. ACR L4F23 (WR L-215), June 1944.
- Crane, H. L. and Reeder, J. P.: Flight Tests of Various Tail Modifications on the Brewster XSBA-1 Airplane. III -Measurements of Flying Qualities with Tail Configuration 3. MR (WR L-599), July 1944.
- White, Maurice D.: Effect of Power on the Stick-Fixed Neutral Points of Several Single-Engine Monoplanes as Determined in Flight. CB L4H01 (WR L-24), Aug. 1944.
- Wick, Bradford H. and Randall, Lauros M.:
 Estimated Longitudinal-Stability and
 Control Characteristics of the Revised
 Vega XP2V-1 Airplane with a B-17F
 Horizontal Tail Including Comparative
 Results for a Varicam Horizontal Tail.
 MR, Sept. 1944.
- Hall, Charles F. and Mannes, Robert L.: Longitudinal Characteristics and Aileron Effectiveness of the XB-42 Airplane from High-Speed Wind-Tunnel Tests. MR (WR (A-84), Sept. 1944.
- Goranson, R. Fabian: A Method for Predicting the Elevator Deflection Required To Land. ARR L4I16 (WR L-95), Sept. 1944.

- Spreiter, John R. and Nissen, James N.: Flight Tests of a Pursuit Airplane Fitted with an Experimental Bellows-Type Bob Weight. MR (WR A-6), Oct. 1944.
- Bielat, Ralph P.: Effect of Compressibility on Longitudinal Stability and Control of 1/5.5-Scale Model of Fighter Airplane. ACR L4J02, Oct. 1944.
- Liddell, Robert B. and Lockwood, Vernard E.: Wind-Tunnel Investigation of Rounded Horns and of Guards on a Horizontal Tail Surface. ARR L4J16 (WR L-60), Oct. 1944.
- Crane, H. L.; Sjoberg, S. A. and Hoover, H. H.: Measurement of Flying Qualities of a Douglas A-26B Airplane (AAF No. 41-39120). I - Longitudinal Stability and Control Characteristics. MR L4L06 (WR L-605), Dec. 1944.
- Kayten, Gerald G. and Koven, William: Comparison of Wind-Tunnel and Flight Measurements of Stability and Control Characteristics of a Douglas A-26 Airplane. Rept. 816, 1945.
- Purser, Paul E. and Campbell, John P.: Experimental Verification of a Simplified Vee-Tail Theory and Analysis of Available Data on Complete Models with Vee Tails. Rept. 823, 1945.
- Brewer, Gerald W.: Langley Full-Scale-Tunnel Stability and Control Tests of the Bell YP-59A Airplane. MR L5A18 (WR L-626), Jan. 1945.
- Phillips, William H.: The Use of Geared Spring Tabs for Elevator Control. RB L5A13 (WR L-30), Feb. 1945.
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.
- Harmon, S. M.: Determination of the Effect of Horizontal-Tail Flexibility on Longitudinal Control Characteristics. ACR L5B01 (WR L-45), Feb. 1945.
- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer No. 04776). I Longitudinal Stability and Control. MR L5B13 (WR L-715), Feb. 1945.
- Riebe, John M. and Church, Oleta: Wind-Tunnel Investigation of Control-Surface Characteristics. XXI - Medium and Large Aerodynamic Balances of Two Nose Shapes and a Plain Overhang Used with a 0.40-Airfoil-Chord Flap on an NACA 0009 Airfoil. ARR L5C01 (WR L-175), March 1945.

Longitudinal Control (Cont.)

- Kleckner, Harold F.: Preliminary Flight Research on an All-Movable Horizontal Tail as a Longitudinal Control for Flight at High Mach Numbers. ARR L5C08 (WR L-89), March 1945.
- Purser, Paul E. and McKinney, Elizabeth G.: Comparison of Pitching Moments Produced by Plain Flaps and by Spoilers and Some Aerodynamic Characteristics of an NACA 23012 Airfoil with Various Types of Aileron. ACR L5C24a (WR L-124), April 1945.
- Crane, Robert M.: Computation of Hinge-Moment Characteristics of Horizontal Tails from Section Data. CB 5B05 (WR A-11), April 1945.
- Delany, Noel K. and Kauffman, William M.:
 Correlation of Wind-Tunnel Predictions
 with Flight Tests of a Twin-Engine
 Patrol Airplane. I Longitudinal Stability and -Control Characteristics.
 MR A5D04 (WR A-86), April 1945.
- Hamilton, William T. and Boddy, Lee E.: High-Speed Wind-Tunnel Tests of Dive-Recovery Flaps on a 0.3-Scale Model of the P-47D Airplane. ACR 5D19, May 1945.
- Hamilton, William T. and Boddy, Lee E.: High Speed Wind Tunnel Tests of a 0.3-Scale Model of the P-47D Airplane. ACR 5D20, May 1945.
- Beeler, De E. and Williams, Walter C.: Flight Tests of Dive-Recovery Flaps on an XP-51 Airplane. ACR L5D20a (WR L-778), May 1945.
- Robinson, Robert C. and Jessen, Henry:
 The Effect of Mach Number on the
 Aerodynamic Characteristics of a
 Single Engine Pursuit Airplane as Determined from Tests of a 1/3-Scale
 Model. MR A5E03 (WR A-76), May
 1945.
- Weil, Joseph and Boykin, Rebecca I.:
 Wind-Tunnel Tests of the 0.15-Scale
 Powered Model of the Fleetwings
 XBTK-1 Airplane. I Longitudinal
 Stability and Control. TED No. NACA
 2332. MR L5D27a (WR L-785), May
 1945.
- Schueler, Carl F. and Korycinski, Peter F.: Effect of Fabric Deflection at High Speeds on the Aerodynamic Characteristics of the Horizontal Tail Surface of an SB2D-1 Airplane. ARR L5F01a (WR L-170), June 1945.

- Feigenbaum, D.: Estimation of the Performance and Longitudinal Stability and Control of a Lifting-Body Type of Cargo Airplane from Tests of Simplified Models. MR L5E09a (WR L-541), June 1945.
- Riebe, John M. and McKinney, Elizabeth G.: Wind-Tunnel Investigation of Control-Surface Characteristics. XXII Medium and Large Aerodynamic Balances of Two Nose Shapes and a Plain Overhang Used with a 0.20-Airfoil-Chord Flap on an NACA 0009 Airfoil. ARR L5F06 (WR L-196), June 1945.
- Liddell, Robert B.: Wind-Tunnel Tests of Spoilers on Tail Surfaces. ARR L5F28 (WR L-260), Aug. 1945.
- Murray, Harry E. and Erwin, Mary A.:
 Hinge Moments of Sealed-Internal-Balance Arrangements for Control Surfaces. I Theoretical Investigation.
 ARR L5F30 (WR L-174), Aug. 1945.
- Kleckner, Harold F.: Use of Variable-Ratio Geared Tabs to Improve Stick-Force Characteristics in Turning Flight. RB L5105 (WR L-85), Oct. 1945.
- Harmon, Sidney M.: Comparison of Fixed-Stabilizer, Adjustable-Stabilizer and All-Movable Horizontal Tails. ACR L5H04 (WR L-195), Oct. 1945.
- Johnson, Harold I. and Mungall, Robert G.: Flight Measurements of the Effect on Elevator Stick Forces of Stabilizer Incidence and Elevator Rib Spacing on the P-63A-1-BE Series Airplane. MR L5J09 (WR L-611), Oct. 1945.
- McCormack, Gerald M.: Tests of an Attack-Type Airplane in the Ames 40 x 80 Foot Wind-Tunnel to Improve the High-Speed Maneuvering Control-Forces Characteristics. MR A5K16 (WR A-2), Dec. 1945.
- Turner, William N.; Steffen, Paul J. and Clousing, Lawrence A.: Compressibility Effects on the Longitudinal Stability and Control of a Pursuit-Type Airplane as Measured in Flight. Rept. 854, 1946.
- Boddy, Lee E.: The High-Speed Characteristics of Several Flaps and Spoilers on the Upper Surface of the Horizontal Stabilizer of an 0.3-Scale Model of a Radial-Engine Pursuit Airplane. MR A5L07 (WR A-72), Ian. 1946.
- Hunter, Paul A. and Reeder, John P.: Flight Measurements to Determine Effect of a Spring-Loaded Tab on Longitudinal Stability of an Airplane. ARR L5I20 (WR L-210), Feb. 1946.

Longitudinal Control (Cont.)

- Tamburello, Vito; Smith, Bernard J. and Silvers, H. Norman: Wind-Tunnel Investigation of Control-Surface Characteristics of Plain and Balanced Flaps on an NACA 0009 Elliptical Semispan Wing. ARR L5L18 (WR L-41), Feb. 1946.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.
- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.
- Phillips, William H.: An Investigation of Additional Requirements for Satisfactory Elevator Control Characteristics. TN 1060, June 1946.
- Johnson, Harold I.: Flight Investigation To Improve the Dynamic Longitudinal Stability and Control-Feel Characteristics of the P-63A-1 Airplane (AAF No. 42-68889) with Closely Balanced Experimental Elevators. MR L6E20 (WR L-730), July 1946.
- Kleckner, Harold F.: Flight Tests of an All-Movable Horizontal Tail with Geared Unbalancing Tabs on the Curtiss XP-42 Airplane. TN 1139, Oct. 1946.
- Robinson, Robert C. and Perone, Angelo: The High-Speed Longitudinal Stability and Control of the Bell P-39N-1 Airplane as Calculated from Propeller-Off Tests of a 0.35-Scale Model. RM A6L27, Jan. 1947.
- Hanson, Carl M. and Anderson, Seth B.: Flight Tests of a Double-Hinged Horizontal Tail Surface with Reference to Longitudinal-Stability and -Control Characteristics. TN 1224, May 1947.
- Rathert, George A., Jr.: Flight Investigation of the Effects on Airplane Static Longitudinal Stability of a Bungee and Engine-Tilt Modifications. TN 1260, May 1947.
- Swanson, Robert S.; Crandall, Stewart M. and Miller, Sadie: A Lifting-Surface-Theory Solution and Tests of an Elliptic Tail Surface of Aspect Ratio 3 with a 0.5-Chord 0.85-Span Elevator. TN 1275, May 1947.

- Bates, William R.: Collection and Analysis of Wind-Tunnel Data on the Characteristics of Isolated Tail Surfaces with and without End Plates. TN 1291, May 1947.
- Schueller, Carl F.: Pressure-Distribution Measurements on a Full-Scale Horizontal Tail Surface for a Mach Number Range of 0.20 to 0.70. RM L7D08, June 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Longitudinal Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1339, July 1947.
- Schade, Robert O.: Effect of Geometric Dihedral on the Aerodynamic Characteristics of Two Isolated Vee-Tail Surfaces. TN 1369, July 1947.
- Hall, Charles F.: The Effect of Modifications to the Horizontal-Tail Profile on the High-Speed Longitudinal Control of a Pursuit Airplane. TN 1302, Aug. 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- Garvin, John B.: Flight Measurements of Aerodynamic Loads on the Horizontal Tail Surface of a Fighter-Type Airplane. TN 1483, Nov. 1947.
- Frick, Charles W., Jr.: Application of the Linearized Theory of Supersonic Flow to the Estimation of Control-Surface Characteristics. TN 1554, March 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Tucker, Warren A.: Characteristics of Thin Triangular Wings with Triangular-Tip Control Surfaces at Supersonic Speeds with Mach Lines Behind the Leading Edge. TN 1600, May 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. II Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 4.5. RM A8B11, June 1948.
- Tucker, Warren A.: Characteristics of Thin Triangular Wings with Constant-Chord Full-Span Control Surfaces at Supersonic Speeds. TN 1601, July 1948.

- Longitudinal Control (Cont.)
- Tucker, Warren A. and Nelson, Robert L.: Characteristics of Thin Triangular Wings with Constant-Chord Partial-Span Control Surfaces at Supersonic Speeds. TN 1660, July 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Lowry, John G. and Schneiter, Leslie E.: Estimation of Effectiveness of Flap-Type Controls on Sweptback Wings. TN 1674, Aug. 1948.
- Tucker, Warren A. and Nelson, Robert L.:
 Theoretical Characteristics in Supersonic Flow of Constant-Chord Partial-Span Control Surfaces on Rectangular Wings Having Finite Thickness. TN 1708, Sept. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Weil, Joseph and Sleeman, William C., Jr.:
 Prediction of the Effects of Propeller
 Operation on the Static Longitudinal
 Stability of Single-Engine Tractor
 Monoplanes with Flaps Retracted. TN
 1722, Oct. 1948.
- Talmage, Donald B. and Reeder, John P.: The Effects of Friction in the Control System on the Handling Qualities of a C-54D Airplane. RM L8G30a, Nov. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. III - Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 6. RM A8H30, Dec. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7 Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Mungall, Robert G.: Flight Investigation of a Combined Geared Unbalancing-Tab and Servotab Control System as Used with an All-Movable Horizontal Tail. TN 1763, Dec. 1948.

- Göthert and Röber: Systematic Investigations of the Effects of Plan Form and Gap Between the Fixed Surface and Control Surface on Simple Flapped Wings. TM 1206, May 1949.
- Lange, Roy H.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.
- Nuber, Robert J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of a Symmetrical Airfoil Section with a Sealed Internally Balanced Control Surface and a Leading Tab. RM L9E27, July 1949.

LATERAL CONTROL (1.8.2.2)

- Bacon, David L.: The Distribution of Lift over Wing Tips and Ailerons. Rept. 161, 1923.
- Hoot, H. I.: The Effect of Airfoil Thickness and Plan Form on Lateral Control. Rept. 169, 1923.
- Diehl, W. S.: Notes on the Design of Ailerons. TN 144, June 1923.
- Wood, R. McKinnon: Control of Airplanes at Low Speeds. TM 230, Sept. 1923.
- Munk, Max M.: The Induction Factor Used for Computing the Rolling Moment due to the Ailerons. TN 187, April 1924.
- Lachmann, G.: Results of Experiments with Slotted Wings. TM 282, Oct. 1924.
- Everling, E.: Slotted-Wing Airplanes. TM 432, Oct. 1927.
- Lachman, G.: The Span as a Fundamental Factor in Airplane Design. TM 479, Sept. 1928.
- Heald, R. H. and Strother, D. H.: Effect of Variation of Chord and Span of Ailerons on Rolling and Yawing Moments in Level Flight. Rept. 298, 1929.
- Wieselsberger, C.: Theoretical Investigation of the Effect of the Ailerons on the Wing of an Airplane. TM 510, April 1929.
- Knight, Montgomery and Bamber, Millard J.: Wind Tunnel Tests on a Model of a Monoplane Wing with Floating Ailerons. TN 316, Sept. 1929.
- Hübner, W.: Information Obtained from Airplane Flight Tests in the Year 1927-1928. TM 535, Oct. 1929.

Lateral Control (Cont.)

- Heald, R. H.; Strother, D. H. and Monish, B. H.: Effect of Variation of Chord and Span of Ailerons on Rolling and Yawing Moments at Several Angles of Pitch. Rept. 343, 1930.
- Knight, Montgomery and Wenzinger, Carl J.: The Effect of Wing Tip Floating Ailerons on the Autorotation of a Monoplane Wing Model. TN 336, March 1930.
- Fuchs, Richard and Schmidt, Wilhelm: Air Forces and Air-Force Moments at Large Angles of Attack and How They Are Affected by the Shape of the Wing. TM 573, July 1930.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. I Ordinary Ailerons on Rectangular Wings.
 Rept. 419, 1932.
- Weick, Fred E. and Noyes, Richard W.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. II Slotted
 Ailerons and Frise Ailerons. Rept.
 422, 1932.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. III Ordinary Ailerons Rigged up 10° when
 Neutral. Rept. 423, 1932.
- Weick, Fred E. and Harris, Thomas A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. IV Floating Tip Ailerons on Rectangular Wings.
 Rept. 424, 1932.
- Weick, Fred E. and Harris, Thomas A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack. VI Skewed
 Ailerons on Rectangular Wings.
 Rept. 444, 1932.
- Weick, Fred E. and Wenzinger, Carl J.: Preliminary Investigation of Rolling Moments Obtained with Spoilers on Both Slotted and Plain Wings. TN 415, April 1932.
- Pris, M.: The Controls at Low Hinge Moments. TM 685, Sept. 1932.
- Pleines, Wilhelm: Further Flight Tests on the Effectiveness of Handley Page Automatic Control Slots. TM 686, Sept. 1932.

- Heald, R. H.: Rolling, Yawing, and Hinge Moments Produced by Rectangular Ailerons. TN 441, Jan. 1933.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack VII Handley Page Tip and Full-Span Slots
 with Ailerons and Spoilers. TN 443,
 Jan. 1933.
- Weick, Fred E. and Shortal, Joseph A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack VIII Straight and Skewed Ailerons on Wings
 with Rounded Tips. TN 445, Feb. 1933.
- Heald, R. H.: Effect of Aileron Displacement on Wing Characteristics, TN 448, Feb. 1933.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack IX Tapered
 Wings with Ordinary Ailerons. TN
 449, Feb. 1933.
- Weick, Fred E. and Noyes, Richard W.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack X Various Control Devices on a Wing with a
 Fixed Auxiliary Airforce. TN 451,
 March 1933.
- Weick, Fred E. and Harris, Thomas A.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack XI Various Floating Tip Ailerons on Both
 Rectangular and Tapered Wings. TN
 458, May 1933.
- Weick, Fred E.: Present Status of Lateral-Control Devices for Use with Split Flaps. ACR, Aug. 1933.
- Soulé, Hartley A. and Wetmore, J. W.: The Effect of Slots and Flaps on Lateral Control of a Low-Wing Monoplane as Determined in Flight. TN 478, Nov. 1933.
- Weick, Fred E.; Soule, Hartley A. and Gough, Melvin N.: A Flight Investigation of the Lateral Control Characteristics of Short Wide Ailerons and Various Spoilers with Different Amounts of Wing Dihedral. Rept. 494, 1934.
- Weick, Fred E. and Wenzinger, Carl J.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices, Particularly
 at High Angles of Attack XII UpperSurface Ailerons on Wings with Split
 Flaps. Rept. 499, 1934.

- Lateral Control (Cont.)
- Bamber, Millard J.: Aerodynamic Rolling and Yawing Moments Produced by Floating Wing-Tip Ailerons, as Measured by the Spinning Balance. TN 493, March 1934.
- Shortal, J. A.: Effect of Retractable-Spoiler Location on Rolling- and Yawing-Moment Coefficients. TN 499, July 1934.
- Weick, Fred E. and Noyes, Richard W.:
 Wind-Tunnel Research Comparing
 Lateral Control Devices Particularly
 at High Angles of Attack XIII Auxiliary Airfoils Used as External
 Ailerons. Rept. 510, 1935.
- Soulé, H. A. and McAvoy, W. H.: Flight Investigation of Lateral Control Devices for Use with Full-Span Flaps. Rept. 517, 1935.
- Weick, Fred E. and Shortal, Joseph A.: Development of the NACA Slot-Lip Aileron. TN 547, Nov. 1935.
- Weick, Fred E. and Jones, Robert T.: The Effect of Lateral Controls in Producing Motion of an Airplane as Computed from Wind-Tunnel Data. Rept. 570, 1936.
- Jones, Robert T.: A Study of the Two-Control Operation of an Airplane. Rept. 579, 1936.
- Jones, Robert T. and Nerken, Albert I.: The Reduction of Aileron Operating Force by Differential Linkage. TN 586, Dec. 1936.
- Shortal, Joseph A.: Wind-Tunnel and Flight Tests of Slot-Lip Ailerons. Rept. 602, 1937.
- Platt, Robert C. and Shortal, Joseph A.: Wind-Tunnel Investigation of Wings with Ordinary Ailerons and Full-Span External-Airfoil Flaps. Rept. 603, 1937.
- Weick, Fred E. and Jones, Robert T.: Resumé and Analysis of NACA Lateral Control Research. Rept. 605, 1937.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Tapered Wings with Ordinary Ailerons and Partial-Span Split Flaps. Rept. 611, 1937.
- Pearson, H. A.: Theoretical Span Loading and Moments of Tapered Wings Produced by Aileron Deflection. TN 589, Jan. 1937.

- Dearborn, C. H. and Soulé, H. A.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with a Zap Flap and Zap Ailerons. TN 596, March 1937.
- Reed, Warren D. and Clay, William C.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with External-Airfoil Flaps. TN 604, July 1937.
- Diehl, W. S.: Considerations Affecting the Additional Weight Required in Mass Balance of Ailerons. TN 609, Aug. 1937.
- Klemin, Alexander: Motion of the Two-Control Airplane in Rectilinear Flight After Initial Disturbances with Introduction of Controls Following an Exponential Law. TN 615, Sept. 1937.
- Soulé, H. A. and Gracey, W.: A Flight Comparison of Conventional Ailerons on a Rectangular Wing and of Conventional and Floating Wing-Tip Ailerons on a Tapered Wing. Rept. 630, 1938.
- Soule, H. A. and Gracey, W.: Improvement of Aileron Effectiveness by the Prevention of Air Leakage Through the Hinge Gap as Determined in Flight. TN 632, Jan. 1938.
- Hartman, Edwin P.: Wind-Tunnel Tests of a 2-Engine Airplane Model as a Preliminary Study of Flight Conditions Arising on the Failure of One Engine. TN 646, April 1938.
- Soulé, H. A. and Hootman, James A.: A Flight Investigation of the Reduction of Aileron Operating Force by Means of Fixed Tabs and Differential Linkage, with Notes on Linkage Design. TN 653, June 1938.
- Wetmore, J. W.: Flight Tests of Retractable Ailerons on a Highly Tapered Wing. TN 714, June 1939.
- Imlay, Frederick H.: A Theoretical Study of Lateral Stability with an Automatic Pilot. Rept. 693, 1940.
- Pearson, Henry A.: A Study of Unsymmetrical-Loading Conditions. TN 757, April 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Gilruth, R. R. and Turner, W. N.: Lateral Control Required for Satisfactory Flying Qualities Based on Flight Tests of Numerous Airplanes. Rept. 715, 1941.

- Harris, Thomas A. and Purser, Paul E.: Wind-Tunnel Investigation of Plain Ailerons for a Wing with a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Retractable Slit Flap. ACR (WR L-317), March 1941.
- Rogallo, Francis M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Plain and Slot-Lip Aileron on a Wing with a Full-Span Slotted Flap. ACR (WR L-375), April 1941.
- Rogallo, F. M.: Aerodynamic Characteristics of a Slot-Lip Aileron and Slotted Flap for Dive Brakes. ACR (WR L-337), April 1941.
- Rogallo, F. M. and Schuldenfrei, Marvin: Wind-Tunnel Investigation of a Plain and a Slot-Lip Aileron on a Wing with a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Slotted Flap. ARR, June 1941.
- Imlay, Frederick H.: The Theoretical Lateral Motions of an Automatically Controlled Airplane Subjected to a Yawing-Moment Disturbance. TN 809, June 1941.
- Harmon, S. M.: Aerodynamic Factors
 Affecting the Ability of a Pilot to Return an Airplane to Level from a
 Banked Attitude by Use of the Rudder
 Alone and Without Change of Heading,
 ARR (WR L-365), Oct. 1941.
- Baker, Paul S.: The Development of a New Lateral-Control Arrangement. ARR, Oct. 1941.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Development of a Plug-Type Spoiler-Slot Aileron for a Wing with a Full-Span Slotted Flap and a Discussion of Its Application. ARR (WR L-420), Nov. 1941.
- Abbott, I. H.: Lift and Drag Characteristics of a Low-Drag Airfoil Model with Slotted Flap Submitted by Curtiss-Wright Corporation. MR (WR L-703), Dec. 1941.
- Jacobs, Eastman N.: Preliminary Drag Tests in Flight of Low-Drag Wing on the Curtiss XP-60 Airplane. MR (WR L-745), Dec. 1941.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of 20-Percent-Chord Plain and Frise Ailerons on an NACA 23012 Airfoil. ARR (WR L-374), Dec. 1941.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Spoiler-Slot Aileron on an NACA 23012 Airfoil with a Full-Span Fowler Flap. ARR (WR L-376), Dec. 1941.

- Williams, W. C. and Kleckner, H. F.: A Flight Investigation of Internally Balanced Sealed Ailerons. ARR (WR L-480), Dec. 1941.
- Jones, Robert T. and Cohen, Doris: Determination of Optimum Planforms for Control Surfaces. Rept. 731, 1942.
- Bailey, F. J., Jr. and O'Sullivan, William J.: A Theoretical Analysis of the Effect of Aileron Inertia and Hinge Moment on the Maximum Rolling Acceleration of Airplanes in Abrupt Aileron Rolls. ARR (WR L-302), Feb. 1942.
- Clousing, L. A.; Lehr, Robert R. and O'Sullivan, William J.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild XR2K-1 Airplane with a Zap Flap and Upper-Surface Aileron-Wing Installation. ARR (WR L-437), March 1942.
- Jones, Robert T. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. V The Use of a Beveled Trailing Edge to Reduce the Hinge Moment of a Control Surface. ARR (WR L-464), March 1942.
- Williams, W. C.: A Flight Investigation of Internally Balanced Sealed Ailerons in the Presence of a Balanced Split Flap. ARR (WR L-242), May 1942.
- Root, L. E.: The Development of Satisfactory Flying Qualities on the Douglas Dive Bomber, Model SBD-1 Through Flight Testing Successive Modifications in Control-Surface Area, Hinge-Line Location, and Aerodynamic-Balance Nose Shape. ACR (WR W-81), May 1942.
- White, M. D. and Hoover, Herbert H.:
 Flight Tests of Modifications To Improve the Aileron Control Characteristics of a North American XP-51
 Airplane (A. C. No. 41-38). MR (WR L-636), June 1942.
- Phillips, William H.: Control-Surface Instability of High-Speed Airplanes. CB, June 1942.
- Sears, Richard I.: Application of Balancing Tabs to Ailerons. RB (WR L-346), June 1942.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. VI A 30Percent-Chord Plain Flap on the NACA
 0015 Airfoil. ARR (WR L-454), June
 1942.
- Gilruth, R. R.: Flight Tests of Internally Balanced, Sealed Ailerons on the Curtiss XP-60 Airplane. CB, July 1942.

- Lateral Control (Cont.)
- Lowry, John G. and Liddell, Robert B.:
 Wind-Tunnel Investigation of a Tapered
 Wing with a Plug-Type Spoiler-Slot
 Aileron and Full-Span Slotted Flaps.
 ARR (WR L-250), July 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of an NACA Full-Span High-Lift Lateral-Control Combination. I - Section Characteristics, NACA 23012 Airfoil. ARR (WR L-288), July 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of a Plain Aileron and a Balanced Aileron on a Tapered Wing with Full-Span Duplex Flaps. ARR (WR L-481), July 1942.
- Phillips, William H.: Comparison of Aileron Control Characteristics as Determined in Flight Tests of P-36, P-40, Spitfire and Hurricane Pursuit Airplanes. CB, Aug. 1942.
- Kleckner, Harold F.: Flight Measurements of the Aileron Characteristics of a Grumman F4F-3 Airplane. ACR, Sept. 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Development of Ailerons for the Curtiss XP-60 Airplane. ACR, Sept. 1942.
- Fehlner, Leo F.: A Study of the Effect of Adverse Yawing Moment on Lateral Maneuverability at a High Lift Coefficient. ARR (WR L-465), Sept. 1942.
- Rogallo, F. M. and Purser, Paul E.:
 Wind-Tunnel Investigation of a Plain
 Aileron with Various Trailing-Edge
 Modifications on a Tapered Wing. I
 Aileron with Fixed Inset Tabs. ARR
 (WR L-513), Sept. 1942.
- Clousing, Lawrence A. and McAvoy, William H.: Flight Measurements of the Lateral-Control Characteristics of an Airplane Equipped with a Combination Aileron-Spoiler Control System. MR (WR A-68), Sept. 1942.
- Underwood, William J.: Aerodynamic Characteristics for Internal-Balance and Frise Type Ailerons on an NACA 6 Series Low-Drag Tip Section of the Wing for the XP-63 Airplane. MR (WR L-645), Oct. 1942.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of a Plain Aileron with Various Trailing-Edge Modifications on a Tapered Wing. II - Ailerons with Thickened and Beveled Trailing Edges. ARR (WR L-228), Oct. 1942.

- Campbell, John P.: Free-Flight Tunnel Investigation of the Effect of Full-Span Flaps on Lateral Stability and Control. ARR, Oct. 1942.
- Graham, Robert R. and Ashworth, C. Dixon: Tests in the 19-Foot Pressure Tunnel of a 1/2.75-Scale Model of the F4U-1 Airplane with Several Balanced Elevators Full-Span Flaps, and Dropable Gas Tank. ACR (WR L-440), Oct. 1942.
- Hoover, Herbert H. and White, Maurice D.: Lateral-Control Characteristics of North American XP-51 Airplane (A. C. Nó. 41-38) with Beveled Trailing-Edge Ailerons in High-Speed Flight. MR (WR L-597), Nov. 1942.
- Lowry, John G.: Adjustment of Stick Force by a Nonlinear Aileron-Stick Linkage. RB (WR L-467), Nov. 1942.
- Soulé, H. A. and Harmon, S. M.: A Study of the Effect of Increased Size and Speed of Pursuit Airplanes on the Aileron Balancing Problem. RB, Nov. 1942.
- Sweberg, Harold H.: Stability and Control Tests of a 3/4-Scale Model of the XP-69 Airplane in the NACA Full-Scale Tunnel. MR (WR L-642), Jan. 1943.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of a Plain Aileron with Various Trailing-Edge Modifications on a Tapered Wing. III - Ailerons with Simple and Spring-Linked Balancing Tabs. ARR (WR L-470), Jan. 1943.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XII Various Cover-Plate Alinements on the NACA 0015 Airfoil with a 30-Percent-Chord Flap and Large Sealed Internal Balance. ARR (WR L-511), Jan. 1943.
- Purser, Paul E. and McKee, John W.: Wind-Tunnel Investigation of a Plain Aileron with Thickened and Beveled Trailing Edges on a Tapered Low-Drag Wing. ACR (WR L-526), Jan. 1943.
- Purser, Paul E. and Toll, Thomas A.: Wind-Tunnel Investigation of the Characteristics of Blunt-Nose Ailerons on a Tapered Wing. ARR (WR L-262), Feb. 1943.
- Rogallo, F. M. and Crandall, Stewart M.: Wind-Tunnel Investigation of Trimming Tabs on a Thickened and Beveled Aileron on a Tapered Low-Drag Wing. ACR (WR L-435), March 1943.

- Lateral Control (Cont.)
- Rogallo, F. M. and Lowry, John G.: Resumé of Data for Internally Balanced Ailerons. RB, March 1943.
- Fehlner, Leo F.: A Study of the Effects of Radii of Gyration and Altitude on Aileron Effectiveness at High Speed. RB 3D26 (WR L-249), April 1943.
- Letko, W.; Denaci, H. G. and Freed, C.: Wind-Tunnel Tests of Ailerons at Various Speeds. I Ailerons of 0.20 Airfoil Chord and True Contour with 0.35 Aileron-Chord Extreme Blunt Nose Balance on the NACA 66,2-216 Airfoil. ACR 3F11 (WR L-431), June 1943.
- Denaci, H. G. and Bird, J. D.: Wind-Tunnel Tests of Ailerons at Various Speeds. II - Ailerons of 0.20 Airfoil Chord and True Contour with 0.60 Aileron-Chord Sealed Internal Balance on the NACA 66,2-216 Airfoil. ACR 3F18 (WR L-432), June 1943.
- Gillis, Clarence L. and Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics.
 XIII Various Flap Overhangs Used with a 30-Percent-Chord Flap on an NACA 66-009 Airfoil. ACR 3G20 (WR L-314), Aug. 1943.
- Turner, William N. and Adams, Betty: Flight Measurements of the Effect of Various Amounts of Aileron Droop on the Low-Speed Lateral-Control Characteristics of an Observation Airplane. MR (WR A-79), Aug. 1943.
- Letko, W.; Hollingworth, T. A. and Anderson, R. A.: Wind-Tunnel Tests of Ailerons at Various Speeds. IV Ailerons of 0.20 Airfoil Chord and True Contour with 0.35 Aileron-Chord Extreme Blunt-Nose Balance on the NACA 23012 Airfoil. ACR 3H28 (WR L-433), Aug. 1943.
- Rogallo, F. M.; Lowry, John G. and Fischel, Jack: Wind-Tunnel Investigation of a Full-Span Retractable Flap in Combination with Full-Span Plain and Internally Balanced Ailerons on a Tapered Wing. ARR 3H23 (WR L-506), Aug. 1943.
- Letko, W. and Kemp, W. B.: Wind-Tunnel Tests of Ailerons at Various Speeds. III - Ailerons of 0.20 Airfoil Chord and True Contour with 0.35-Aileron-Chord Frise Balance on the NACA 23012 Airfoil. ACR 3I14 (WR L-325), Sept. 1943.

- Swanson, Robert S. and Toll, Thomas A.:
 Estimation of Stick Forces from WindTunnel Aileron Data. ARR 3J29, Oct.
 1943.
- Bird, J. D. and Mendelsohn, Robert A.: Wind-Tunnel Tests of a Piston-Type Control Booster on an Airfoil and Aileron Model. RB 3K15 (WR L-494), Nov. 1943.
- Letko, W. and Denaci, H. G.: Wind Tunnel Tests of Ailerons at Various Speeds. V - Pressure Distributions over the NACA 66,2-216 and NACA 23012 Airfoils with Various Balances on 0.20-Chord Ailerons. ACR 3K05 (WR L-434), Nov. 1943.
- Spahr, J. Richard and Christopherson,
 Don R.: Measurements in Flight of the
 Stability, Lateral-Control, and Stalling
 Characteristics of an Airplane Equipped
 with Full-Span Zap Flaps and SpoilerType Ailerons. MR (WR A-28), Dec.
 1943.
- White, Maurice D. and Hoover, Herbert H.: Flight Tests of Beveled-Trailing-Edge Ailerons with Various Modifications on a North American XP-51 Airplane (AAF No. 41-38). MR (WR L-550), Dec. 1943.
- Swanson, Robert S. and Gillis, Clarence
 L.: Limitations of Lifting-Line Theory
 for Estimation of Aileron HingeMoment Characteristics. CB 3L02
 (WR L-281), Dec. 1943.
- Sears, Richard I.: Wind-Tunnel Data on the Aerodynamic Characteristics of Airplane Control Surfaces. ACR 3L08 (WR L-663), Dec. 1943.
- Wetmore, Joseph W. and Sawyer, Richard H.: Flight Tests of F2A-2 Airplane with Full-Span Slotted Flaps and Trailing-Edge and Slot-Lip Ailerons. ARR 3L07 (WR L-272), Dec. 1943.
- Cohen, Doris: A Theoretical Investigation of the Rolling Oscillations of an Airplane with Ailerons Free. Rept. 787, 1944.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Pearson, Henry A. and Aiken, William S., Jr.: Charts for the Determination of Wing Torsional Stiffness Required for Specified Rolling Characteristics or Aileron Reversal Speed. Rept. 799, 1944.

- Lateral Control (Cont.)
- Crane, Robert M. and Holtzclaw, Ralph W.: Wind-Tunnel Investigation of the Effects of Profile Modifications and Tabs on the Characteristics of Ailerons on a Low-Drag Airfoil. Rept. 803, 1944.
- Brewer, Gerald W.: Tests of the Northrop MX-334 Glider Airplane in the NACA Full-Scale Tunnel. MR (WR L-628), Jan. 1944.
- Imlay, Frederick H. and Bird, J. D.: Wind-Tunnel Tests of Hinge-Moment Characteristics of Spring-Tab Ailerons. ARR 4A26 (WR L-318), Jan. 1944.
- Harmon, Sidney M.: Determination of the Effect of Wing Flexibility on Lateral Maneuverability and a Comparison of Calculated Rolling Effectiveness with Flight Results. ARR 4A28 (WR L-525), Jan. 1944.
- Rogallo, F. M.: Collection of Balanced-Aileron Test Data. ACR 4A11 (WR L-419), Jan. 1944.
- Sears, Richard I. and Liddell, Robert B.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVIII - A Linked Overhang Aerodynamic Balance. ACR 4B28 (WR L-350), Feb. 1944.
- Pitkin, Marvin: Force Tests of a 1/5-Scale Model of the Type GB-5 Controllable Glide Bomb. MR (WR L-133), March 1944.
- Phillips, W. H.; Williams, W. C. and Hoover, H. H.: Measurements of Flying Qualities of a Curtiss SB2C-1 Airplane (No. 0014). MR (WR L-571), March 1944.
- Jones, R. T. and Underwood, W. J.: Wind-Tunnel Investigation of a Beveled Aileron Shape Designed to Increase the Useful Deflection Range. MR (WR L-651), April 1944.
- Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVII Beveled-Trailing-Edge Flaps of 0.20, 0.30, and 0.40 Airfoil Chord on an NACA 0009 Airfoil. ACR L4D12 (WR L-666), April 1944.
- Murray, Harry E. and Gills, Clarence L.:
 An Automatically Variable Control
 Linkage and Its Effect on the LateralControl Characteristics of a HighSpeed Fighter Airplane. RB L4E23
 (WR L-65), May 1944.
- Murray, Harry E. and Warren, S. Anne: Effect of Changes in Aileron Rigging on the Stick Forces of a High-Speed Fighter Airplane. RB L4E11 (WR L-289), May 1944.

- Swanson, Robert S. and Crandall, Stewart M.: Analysis of Available Data on the Effectiveness of Ailerons Without Exposed Overhang Balance. ACR L4E01 (WR L-171), May 1944.
- Purser, Paul E. and Toll, Thomas A.: Analysis of Available Data on Control Surfaces Having Plain-Overhang and Frise Balances. ACR L4E13 (WR L-665), May 1944.
- Liddell, Robert B.: Wind-Tunnel Investigation of Control-Surface Characteristics. XIX - A Double Flap with an Overhang and an Internal Aerodynamic Balance. ACR L4F23 (WR L-215), June 1944.
- Luoma, Arvo A.: Effect of Compressibility on Pressure Distribution over an Airfoil with a Slotted Frise Aileron. ACR L4G12 (WR L-266), July 1944.
- Wallace, Arthur R.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. II - Preliminary Investigation of Lateral Stability and Control. MR (WR L-787), Aug. 1944.
- Spahr, J. Richard and Christophersen, Don R.: Measurements in Flight of the Lateral-Control Characteristics of a Navy OS2U-2 Airplane (No. 3075) Equipped with Full-Span Zap Flaps and Simple Circular-Arc-Type Ailerons. MR (WR A-32), Sept. 1944.
- Hall, Charles F. and Mannes, Robert L.: Longitudinal Characteristics and Aileron Effectiveness of the XB-42 Airplane from High-Speed Wind-Tunnel Tests. MR (WR A-84), Sept. 1944.
- Spooner, Stanley H.; Ashworth, C. Dixon and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. II Roll-Flap Positioning and Lateral-Control Investigation. MR (WR L-564), Sept. 1944.
- Becker, John V. and Korycinski, Peter F.: Aerodynamic Tests of a Full-Scale TBF-1 Aileron Installation in the Langley 16-Foot High-Speed Tunnel. ARR L4K22 (WR L-31), Dec. 1944.
- Kayten, Gerald G. and Koven, William: Comparison of Wind-Tunnel and Flight Measurements of Stability and Control Characteristics of a Douglas A-26 Airplane. Rept. 816, 1945.
- Brewer, Gerald W.: Langley Full-Scale-Tunnel Stability and Control Tests of the Bell YP-59A Airplane. MR L5A18 (WR L-626), Jan. 1945.

Lateral Control (Cont.)

- Goranson, R. Fabian: Measurement of Individual Aileron Hinge Moments and Aileron Control Characteristics of a P-40F Airplane. MR L5A29a (WR L-649), Jan. 1945.
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.
- Bird, J. D.: Wind-Tunnel Tests of a Blunt-Nose Aileron with Beveled Trailing Edge on an NACA 66(215)-216 Airfoil with Several Modifications of Aileron Nose and Adjacent Airfoil Contour. ACR L5B10 (WR L-105), Feb. 1945.
- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer No. 04776). II. Lateral and Directional Stability and Control. MR L5B13a (WR L-716), Feb. 1945.
- Alexander, S. R. and Sivells, James C.:
 Tests of a 1/14-Scale Powered Model
 of the XB-36 Airplane in the Langley
 19-Foot Pressure Tunnel. I Stalling
 Characteristics and Aileron Effectiveness of Several Wing and Flap Arrangements. MR L5B23 (WR L-624), Feb.
 1945.
- Purser, Paul E. and McKinney, Elizabeth G.: Comparison of Pitching Moments Produced by Plain Flaps and by Spoilers and Some Aerodynamic Characteristics of an NACA 23012 Airfoil with Various Types of Aileron. ACR L5C24a (WR L-124), April 1945.
- Toll, Thomas A. and Ivey, Margaret F.:
 Wind-Tunnel Investigation of a Rectangular NACA 2212 Airfoil with Semispan Ailerons and with Nonperforated,
 Balanced Double Split Flaps for Use as Aerodynamic Brakes. ARR L5B17 (WR L-56), April 1945.
- Williams, Walter C.: Flight Tests of the Lateral Control Characteristics of an F6F-3 Airplane Equipped with Spring-Tab Ailerons. ARR L5C23 (WR L-149), April 1945.
- Underwood, William J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of Spoiler Aileron Flap Model for the Hughes XF-11 Airplane. MR L5C29 (WR L-644), April 1945.

- Laitone, Edmund V. and Summers, James L.: An Additional Investigation of the High-Speed Lateral-Control Characteristics of Spoilers. ACR 5D28 (WR A-21), June 1945.
- Goodson, Kenneth W. and Silvers, H.
 Norman: Wind-Tunnel Tests of the
 0.15-Scale Powered Model of the
 Fleetwings XBTK-1 Airplane. III Lateral Stability and Control TED No.
 NACA 2332. MR L5F20 (WR L-786),
 July 1945.
- Bird, J. D.: Effect of Leakage Past Aileron Nose on Aerodynamic Characteristics of Plain and Internally Balanced Ailerons on NACA 66(215)-216, a = 1.0 Airfoil. ACR L5F13a (WR L-172), July 1945.
- Skoog, Richard B.: A Comparison of Two Flight-Test Procedures for the Determination of Aileron Control Capabilities of an Airplane. ARR 5E22 (WR A-37), July 1945.
- Murray, Harry E. and Erwin, Mary A.: Hinge Moments of Sealed-Internal-Balance Arrangements for Control Surfaces. I - Theoretical Investigation. ARR L5F30 (WR L-174), Aug. 1945.
- Spearman, M. Leroy: Wind-Tunnel Investigation of Control-Surface Characteristics. XXIII A 0.25-Airfoil-Chord Flap with Tab Having a Chord Twice the Flap Chord on an NACA 0009 Airfoil. ARR L5G25 (WR L-47), Sept. 1945.
- Sjoberg, S. A.: Flight Tests of Two Airplanes Having Moderately High Effective Dihedral and Different Directional Stability and Control Characteristics. CB L5H08 (WR L-40), Oct. 1945.
- Williams, Walter C.: A Flight Investigation of NACA Aileron Modifications for the Improvement of the Lateral Control Characteristics of a High-Speed Fighter Airplane. ACR L5J29 (WR L-194), Dec. 1945.
- McCormack, Gerald: Tests of an Attack-Type Airplane in the Ames 40 x 80 Foot Wind-Tunnel To Improve the High-Speed Maneuvering Control-Forces Characteristics. MR A5K16 (WR A-2), Dec. 1945.
- Ashkenas, I. L.: The Development of a Lateral-Control System for Use with Large-Span Flaps. TN 1015, Jan. 1946.

Lateral Control (Cont.)

- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.
- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.
- Spreiter, John R. and Galster, George M.:
 Observations of Aileron Flutter on the
 Bell P-63A-6 Airplane in Flight at
 High Mach Numbers. ACR 6B08, April
 1946.
- Luoma, Arvo A.: Effect of Compressibility on Section Characteristics of an Airfoil with a Round-Nose Slotted Frise Aileron. TN 1075, May 1946.
- Soulé, Hartley A.: Influence of Large Amounts of Wing Sweep on Stability and Control Problems of Aircraft. TN 1088, June 1946.
- Goranson, R. Fabian: Flight Tests of Experimental Beveled-Trailing-Edge Frise Ailerons on a Fighter Airplane. TN 1085, July 1946.
- Spohr, J. Richard: Lateral-Control Characteristics of Various Spoiler Arrangements as Measured in Flight. TN 1123, Jan. 1947.
- Harper, Charles W. and Jones, Arthur L.: A Comparison of the Lateral Motion Calculated for Tailless and Conventional Airplanes. TN 1154, Feb. 1947.
- Sawyer, Richard H.: Flight Measurements of the Lateral Control Characteristics of Narrow-Chord Ailerons on the Trailing Edge of a Full-Span Slotted Flap. TN 1188, Feb. 1947.
- Toll, Thomas A.: Summary of Lateral-Control Research. TN 1245, March 1947.
- Campbell, John P. and Drake, Hubert M.: Investigation of Stability and Control Characteristics of an Airplane Model with Skewed Wing in the Langley Free-Flight Tunnel. TN 1208, May 1947.
- Bennett, Charles V. and Johnson, Joseph L.: Experimental Determination of the Damping In Roll and Aileron Rolling Effectiveness of Three Wings Having 2, 42°, and 62° Sweepback. TN 1278, May 1947.

- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Fischel, Jack and Tamburello, Vito: Investigation of Effect of Span, Spanwise Location, and Chordwise Location of Spoilers on Lateral Control Characteristics of a Tapered Wing. TN 1294, May 1947.
- Fitzpatrick, James E. and Furlong, G. Chester: Effect of Spoiler-Type Lateral-Control Devices on the Twisting Moments of a Wing of NACA 230-Series Airfoil Sections. TN 1298, May 1947.
- MacLachlan, Robert and Letko, William: Correlation of Two Experimental Methods of Determining the Rolling Characteristics of Unswept Wings. TN 1309, May 1947.
- Wallace, Arthur R. and Comenzo, Raymond J.: Effect of Engine Skew on Directional and Lateral Control Characteristics of Single-Engine Airplanes. RM L6I16, May 1947.
- Murray, Harry E. and Wells, Evalyn G.:
 Wind-Tunnel Investigation of the Effect
 of Wing-Tip Fuel Tanks on Characteristics of Unswept Wings in Steady
 Roll. TN 1317, June 1947.
- Deters, Owen J.: Estimation of Control Forces of Spring-Tab Ailerons from Wind-Tunnel Data. TN 1333, June 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1379, July 1947.
- Forsyth, Charles M. and Gray, William E., Jr.: A Comparison of Flight-Test Results on a Scout-Bomber Airplane with 4.7° and with 10° Geometric Dihedral in the Wing Outer Panels. TN 1407, Aug. 1947.
- Deters, Owen J. and Russell, Robert T.: Investigation of a Spoiler-Type Lateral Control System on a Wing with Full-Span Flaps in the Langley 19-Foot Pressure Tunnel. TN 1409, Aug. 1947.

- Lateral Control (Cont.)
- Deters, Owen J. and Russell, Robert T.: Investigation of the Aileron and Tab of a Spring-Tab Lateral Control System in the Langley 19-Foot Pressure Tunnel. TN 1431, Sept. 1947.
- Deters, Owen J.: Comparison of the Control-Force Characteristics of Two Types of Lateral-Control System for Large Airplanes. TN 1441, Sept. 1947.
- Fischel, Jack and Schneiter, Leslie E.: High-Speed Wind-Tunnel Investigation of High Lift and Aileron-Control Characteristics of an NACA 65-210 Semispan Wing. TN 1473, Nov. 1947.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a 35° Sweptback Wing with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1511, Jan. 1948.
- Frick, Charles W., Jr.: Application of the Linearized Theory of Supersonic Flow to the Estimation of Control-Surface Characteristics. TN 1554, March 1948.
- Hopkins, Edward J.: A Wind-Tunnel Investigation at Low Speed of Various Lateral Controls on a 45° Swept-Back Wing. RM A7L16, April 1948.
- Fischel, Jack and Ivey, Margaret F.: Collection of Test Data for Lateral Control with Full-Span Flaps. TN 1404, April 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Tucker, Warren A.: Characteristics of Thin Triangular Wings with Triangular-Tip Control Surfaces at Supersonic Speeds with Mach Lines Behind the Leading Edge. TN 1600, May 1948.
- Schneiter, Leslie E. and Watson, James M.: Low-Speed Wind-Tunnel Investigation of Various Plain-Spoiler Configurations for Lateral Control on a 42° Sweptback Wing. TN 1646, June 1948.
- McKinney, Marion O., Jr. and Shanks, Robert E.: Lateral Stability and Control Characteristics of a Free-Flying Model Having an Unswept Wing with an Aspect Ratio of 2. TN 1658, July 1948.
- Tucker, Warren A. and Nelson, Robert L.: Characteristics of Thin Triangular Wings with Constant-Chord Partial-Span Control Surfaces at Supersonic Speeds. TN 1660, July 1948.

- Fischel, Jack and Schneiter, Leslie E.:
 High-Speed Wind-Tunnel Investigation
 of an NACA 65-210 Semispan Wing
 Equipped with Plug and Retractable
 Ailerons and a Full-Span Slotted Flap.
 TN 1663, July 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Lowry, John G. and Schneiter, Leslie E.: Estimation of Effectiveness of Flap-Type Controls on Sweptback Wings. TN 1674, Aug. 1948.
- Cooney, T. V. and Wollner, Bertram C.:
 A Comparison of Flight Measurements
 with Calculations of the Loss in Rolling
 Effectiveness Due to Wing Twist. RM
 L8F07, Aug. 1948.
- Tucker, Warren A. and Nelson, Robert L.:
 Theoretical Characteristics in Supersonic Flow of Constant-Chord Partial-Span Control Surfaces on Rectangular Wings Having Finite Thickness. TN 1708, Sept. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Talmage, Donald B. and Reeder, John P.: The Effects of Friction in the Control System on the Handling Qualities of a C-54D Airplane. RM L8G30a, Nov. 1948.
- Schneiter, Leslie E. and Naeseth, Rodger L.: Wind-Tunnel Investigation at Low Speed of the Lateral Control Characteristics of Ailerons Having Three Spans and Three Trailing-Edge Angles on a Semispan Wing Model. TN 1738, Nov. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Stability, Control, and Stalling Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 80-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1743, Nov. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Tucker, Warren A. and Nelson, Robert L.: The Flexible Rectangular Wing in Roll at Supersonic Flight Speeds. TN 1769, Dec. 1948.

- Lateral Control (Cont.)
- Diederich, Franklin W.: Calculation of the Effects of Structural Flexibility on Lateral Control of Wings of Arbitrary Plan Form and Stiffness. RM L8H24a, Dec. 1948.
- Fischel, Jack: Wind-Tunnel Investigation of an NACA 65-210 Semispan Wing Equipped with Circular Plug Ailerons and a Full-Span Slotted Flap. TN 1802, Jan. 1949.
- Braslow, Albert L. and Visconti,
 Fioravante: Two-Dimensional WindTunnel Investigation of Two NACA 7Series Type Airfoils Equipped with a
 Slot-Lip Aileron, Trailing-Edge Frise
 Aileron, and a Double Slotted Flap.
 RM L9B23, March 1949.
- Fischel, Jack and Vogler, Raymond D.:
 High-Lift and Lateral Control Characteristics of an NACA 652-215 Semispan Wing Equipped with Plug and Retractable Ailerons and a Full-Span Slotted Flap. TN 1872, April 1949.
- Tucker, Warren A. and Nelson, Robert L.: The Effect of Torsional Flexibility on the Rolling Characteristics at Supersonic Speeds of Tapered Unswept Wings. TN 1890, June 1949.
- Lange, Roy H.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.
- Nuber, Robert J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of a Symmetrical Airfoil Section with a Sealed Internally Balanced Control Surface and a Leading Tab. RM L9E27, July 1949.
- Fischel, Jack and Watson, James M.: Investigation of Spoiler Ailerons for Use as Speed Brakes or Glide-Path Controls on Two NACA 65-Series Wings Equipped with Full-Span Slotted Flaps. TN 1933, Aug. 1949.

DIRECTIONAL CONTROL (1.8.2.3)

- Hoot, H. I. and Bacon, D. L.: The Effect on Rudder Control of Slip Stream Body, and Ground Interference. TN 110, Sept. 1922.
- Wood, R. McKinnon: Control of Airplanes at Low Speeds. TM 230, Sept. 1923.
- Thompson, F. L.: Full-Scale Turning Characteristics of the U.S.S. Los Angeles. Rept. 333, 1929.

- Hübner, W.: Information Obtained from Airplane Flight Tests in the Year 1927-1928. TM 535, Oct. 1929.
- Dryden, Hugh L. and Monish, B. H.: The Effect of Area and Aspect Ratio on the Yawing Moments of Rudders at Large Angles of Pitch on Three Fuselages. Rept. 437, 1932.
- Pris, M.: The Controls at Low Hinge Moments. TM 685, Sept. 1932.
- Soulé, Hartley A. and Wetmore, J. W.: The Effect of Slots and Flaps on Lateral Control of a Low-Wing Monoplane as Determined in Flight. TN 478, Nov.
- Scudder, N. F.: The Forces and Moments Acting on Parts of the XN2Y-1 Airplane During Spins. Rept. 559, 1936.
- Jones, Robert T.: A Study of the Two-Control Operation of an Airplane. Rept. 579, 1936.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Tapered Wings with Ordinary Ailerons and Partial-Span Split Flaps. Rept. 611, 1937.
- Klemin, Alexander: Motion of the Two-Control Airplane in Rectilinear Flight After Initial Disturbances with Introduction of Controls Following an Exponential Law. TN 615, Sept. 1937.
- Pass, H. R.: Analysis of Wind-Tunnel Data on Directional Stability and Control. TN 775, Sept. 1940.
- Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. III A Small Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-301), Aug. 1941.
- Ames, Milton B., Jr. and Eastman, Donald R., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. IV - A Medium Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-355), Sept. 1941.
- Harmon, S. M.: Aerodynamic Factors
 Affecting the Ability of a Pilot to Return an Airplane to Level from a
 Banked Attitude by Use of the Rudder
 Alone and Without Change of Heading.
 ARR (WR L-365), Oct. 1941.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Development of a Plug-Type Spoiler-Slot Aileron for a Wing with a Full-Span Slotted Flap and a Discussion of its Application. ARR (WR L-420), Nov. 1941.

- Directional Control (Cont.)
- Jones, Robert T. and Cohen, Doris: Determination of Optimum Planforms for Control Surfaces. Rept. 731, 1942.
- Jones, Robert T. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. V -The Use of a Beveled Trailing Edge to Reduce the Hinge Moment of a Control Surface. ARR (WR L-464), March 1942.
- Root, L. E.: The Development of Satisfactory Flying Qualities on the Douglas Dive Bomber, Model SBD-1 Through Flight Testing Successive Modifications in Control-Surface Area, Hinge-Line Location, and Aerodynamic-Balance Nose Shape. ACR (WR W-81), May 1942.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. VI A 30Percent-Chord Plain Flap on the NACA
 0015 Airfoil. ARR (WR L-454), June
 1942.
- Sweberg, Harold H.: Stability and Control Tests of a 3/4-Scale Model of the XP-69 Airplane in the NACA Full-Scale Tunnel. MR (WR L-642), Jan. 1943.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XI Various Large Overhang and Internal-Type Aerodynamic Balances for a Straight-Contour Flap on the NACA 0015 Airfoil. ARR (WR L-447), Jan. 1943.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XII Various Cover-Plate Alinements on the NACA 0015 Airfoil with a 30-Percent-Chord Flap and Large Sealed Internal Balance. ARR (WR L-511), Jan. 1943.
- Sears, Richard I. and Purser, Paul E.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XIV NACA
 0009 Airfoil with a 20-Percent-Chord
 Double Plain Flap. ARR 3F29 (WR
 L-290), June 1943.
- Lowry, John G.: Resume of Hinge-Moment Data for Unshielded Horn-Balanced Control Surfaces. RB 3F19 (WR L-169), June 1943.
- Kleckner, Harold F.: Flight Tests of an All-Movable Vertical Tail on the Fairchild XR2K-1 Airplane. ACR 3F26 (WR L-397), June 1943.

- Recant, I. G. and Wallace, Arthur R.:
 Wind-Tunnel Tests of the 1/9-Scale
 Model of the Curtiss XP-62 Airplane
 with Various Vertical Tail Arrangements, MR (WR L-779), July 1943.
- Gillis, Clarence L. and Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics.
 XIII Various Flap Overhangs Used with a 30-Percent-Chord Flap on an NACA 66-009 Airfoil. ACR 3G20 (WR L-314), Aug. 1943.
- Sears, Richard I.: Wind-Tunnel Data on the Aerodynamic Characteristics of Airplane Control Surfaces. ACR 3L08 (WR L-663), Dec. 1943.
- Phillips, W. H. and Crane, H. L.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. II Measurements of Flying Qualities with
 Tail Configuration Number Two. MR
 (WR L-598), Dec. 1943.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XVIII A
 Linked Overhang Aerodynamic Balance.
 ACR 4B28 (WR L-350), Feb. 1944.
- Lowry, John G.; Maloney, James A. and Garner, I. Elizabeth: Wind-Tunnel Investigation of Shielded Horn Balances and Tabs on a 0.7-Scale Model of XF6F Vertical Tail Surface. ACR 4C11 (WR L-516), March 1944.
- Pitkin, Marvin: Force Tests of a 1/5-Scale Model of the Type GB-5 Controllable Glide Bomb. MR (WR L-133), March 1944.
- Hoggard, H. Page, Jr. and Bulloch,
 Marjorie E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVI Pressure Distribution over an NACA 0009 Airfoil with 0.30-Airfoil-Chord Beveled-Trailing-Edge Flaps. ARR L4D03 (WR L-205), April 1944.
- Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVII Beveled-Trailing-Edge Flaps of 0.20, 0.30, and 0.40 Airfoil Chord on an NACA 0009 Airfoil. ACR L4D12 (WR L-666), April 1944.
- Purser, Paul E. and Toll, Thomas A.: Analysis of Available Data on Control Surfaces Having Plain-Overhang and Frise Balances. ACR L4E13 (WR L-665), May 1944.

- Directional Control (Cont.)
- Liddell, Robert B.: Wind-Tunnel Investigation of Control-Surface Characteristics. XIX A Double Flap with an Overhang and an Internal Aerodynamic Balance. ACR L4F23 (WR L-215), June 1944.
- Dods, Jules B., Jr. and Douglass, William M.: Wind-Tunnel Investigation of a 1/20-Scale Powered Model of a Four-Engine Transport Airplane. MR (WR A-94), July 1944.
- Wallace, Arthur R.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. II - Preliminary Investigation of Lateral Stability and Control. MR (WR L-787), Aug. 1944.
- Phillips, W. H.; Crane, H. L. and Hunter, P. A.: Effect of Lateral Shift of Center of Gravity on Rudder Deflection Required for Trim. RB L4106 (WR L-92), Nov. 1944.
- McKinney, Marion O., Jr. and Maggin, Bernard: Experimental Verification of the Rudder-Free Stability Theory for an Airplane Model Equipped with Rudders Having Negative Floating Tendency and Negligible Friction. ARR L4J05a (WR L-184), Nov. 1944.
- Kayten, Gerald G. and Koven, William: Comparison of Wind-Tunnel and Flight Measurements of Stability and Control Characteristics of a Douglas A-26 Airplane. Rept. 816, 1945.
- Purser, Paul E. and Campbell, John P.: Experimental Verification of a Simplified Vee-Tail Theory and Analysis of Available Data on Complete Models with Vee Tails. Rept. 823, 1945.
- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAero No. 04776). II. Lateral and Directional Stability and Control. MR L5B13a (WR L-716), Feb. 1945.
- Williams, Walter C.: Flight Tests of a Rudder with a Spring Tab on an F6F-3 Airplane (BuAer No. 04776). MR L5C19 (WR L-718), March 1945.
- Neihouse, Anshal I. and Kemp, W. B.: Effect of Fabric Deflection on Rudder Hinge-Moment Characteristics as Determined by Wind-Tunnel Tests. ARR L5A24, April 1945.

- Riebe, John M. and McKinney, Elizabeth G.: Wind-Tunnel Investigation of Control-Surface Characteristics.

 XXII Medium and Large Aerodynamic Balances of Two Nose Shapes and a Plain Overhang Used with a 0.20-Airfoil-Chord Flap on an NACA 0009 Airfoil. ARR L5F06 (WR L-196), June 1945.
- Goodson, Kenneth W. and Silvers, H.
 Norman: Wind-Tunnel Tests of the
 0.15-Scale Powered Model of the
 Fleetwings XBTK-1 Airplane. III Lateral Stability and Control TED No.
 NACA 2332. MR L5F20 (WR L-786),
 July 1945.
- Murray, Harry E. and Erwin, Mary A.:
 Hinge Moments of Sealed-InternalBalance Arrangements for Control
 Surfaces. I Theoretical Investigation. ARR L5F30 (WR L-174), Aug.
 1945.
- Sjoberg, S. A.: Flight Tests of Two Airplanes Having Moderately High Effective Dihedral and Different Directional Stability and Control Characteristics. CB L5H08 (WR L-40), Oct. 1945.
- Sweberg, Harold H.; Guryansky, Eugene R. and Lange, Roy H.: Langley Full-Scale Tunnel Investigation of the Factors Affecting the Directional Stability and Trim Characteristics of a Fighter-Type Airplane. ARR L5H09 (WR L-109), Nov. 1945.
- Tamburello, Vito; Smith, Bernard J. and Silvers, H. Norman: Wind-Tunnel Investigation of Control-Surface Characteristics of Plain and Balanced Flaps on an NACA 0009 Elliptical Semispan Wing. ARR L5L18 (WR L-41), Feb. 1946.
- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.
- Lowry, John G.; Turner, Thomas R. and Liddell, Robert B.: Aerodynamic Characteristics of Several Modifications of a 0.45-Scale Model of the Vertical Tail of the Curtiss XP-62 Airplane. MR L6F27 (WR L-736), July 1946.
- Mungall, Robert G.: Flight Measurements of the Directional Stability and Control of a P-51D Airplane with a Horn-Balanced Rudder as Compared with Previously Tested Vertical-Tail Configurations. RM L6J25, Dec. 1946.

- Directional Control (Cont.)
- Harper, Charles W. and Jones, Arthur L.: A Comparison of the Lateral Motion Calculated for Tailless and Conventional Airplanes. TN 1154, Feb. 1947.
- Wallace, Arthur R. and Comenzo, Raymond J.: Effect of Engine Skew on Directional and Lateral Control Characteristics of Single-Engine Airplanes. RM L6I16, May 1947.
- Tamburello, Vito and Weil, Joseph: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1327, June 1947.
- Stone, Ralph W., Jr. and Burk, Sanger M., Jr.: Effect of Horizontal-Tail Position on the Hinge Moments of an Unbalanced Rudder in Attitudes Simulating Spin Conditions. TN 1337, June 1947.
- Maggin, Bernard: Experimental Verification of the Rudder-Free Stability
 Theory for an Airplane Model Equipped with a Rudder Having Positive Floating Tendencies and Various Amounts of Friction. TN 1359, July 1947.
- Schade, Robert O.: Effect of Geometric Dihedral on the Aerodynamic Characteristics of Two Isolated Vee-Tail Surfaces. TN 1369, July 1947.
- Hagerman, John R.: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Stability and Control Characteristics of a Single-Engine High-Wing Airplane Model. TN 1379, July 1947.
- Stone, Ralph W., Jr. and Burk, Sanger M., Jr.: Hinge-Moment Characteristics of Balanced Elevator and Rudder for a Specific Tail Configuration on a Fuselage in Spinning Attitudes. TN 1400, Aug. 1947.
- Polhamus, Edward C. and Moss, Robert J.: Wind-Tunnel Investigation of the Stability and Control Characteristics of a Complete Model Equipped with a Vee Tail. TN 1478, Nov. 1947.
- Frick, Charles W., Jr.: Application of the Linearized Theory of Supersonic Flow to the Estimation of Control-Surface Characteristics. TN 1554, March 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.

- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails.
 II Unswept and 35° Swept-Back
 Plan Forms of Aspect Ratio 4.5.
 RM A8B11, June 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Talmage, Donald B. and Reeder, John P.: The Effects of Friction in the Control System on the Handling Qualities of a C-54D Airplane. RM L8G30a, Nov. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. III Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 6. RM A8H30, Dec. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Lockwood, Vernard E. and Watson, James M.: Stability and Control Characteristics at Low Speed of an Airplane Model Having a 38.7° Sweptback Wing with Aspect Ratio 4.51, Taper Ratio 0.54, and Conventional Tail Surfaces. TN 1742, Dec. 1948.
- Gothert and Rober: Systematic Investigations of the Effects of Plan Form and Gap Between the Fixed Surface and Control Surface on Simple Flapped Wings. TM 1206, May 1949.
- Lange, Roy H.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.
- Nuber, Robert J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of a Symmetrical Airfoil Section with a Sealed Internally Balanced Control Surface and a Leading Tab. RM L9E27, July 1949.

AIRBRAKES (1.8.2.4)

Hübner, Walter and Pleines, Wilhelm: The D.V.L. Gliding-Angle Control (W. Hubner Design). TM 697, Jan. 1933.

- Airbrakes Control (Cont.)
- Rhode, Richard V. and Pearson, Henry A.: Flight Tests of the Drag and Torque of the Propeller in Terminal-Velocity Dives. Rept. 599, 1937.
- Jacobs, Hans and Wanner, Adolf: DFS
 Dive-Control Brakes for Gliders and
 Airplanes, and Wanner, Adolf: Analytical Study of the Drag of the DFS
 Dive-Control Brake. TM 926, Jan.
 1940.
- Rogallo, F. M.: Aerodynamic Characteristics of a Slot-Lip Aileron and Slotted Flap for Dive Brakes. ACR (WR L-337), April 1941.
- Purser, Paul E.: A Study of the Application of Data on Various Types of Flap to the Design of Fighter Brakes. ACR (WR L-414), June 1942.
- Fuchs, E. D.: Wind-Tunnel Investigations of Diving Brakes. TM 1033, Nov. 1942.
- Davis, Wallace F.: Aerodynamic Brakes. ACR 3H26, Aug. 1943.
- Hedrick, William S. and Douglass, William M.: An Experimental Investigation of the Thrust and Torque Produced by Propellers Used as Aerodynamic Brakes. ARR 4H26 (WR A-27), Aug. 1944.
- Gray, W. H. and Gilman, Jean, Jr.: Characteristics of Several Single- and Dual-Rotating Propellers in Negative Thrust. MR L5C07 (WR L-634), March 1945.
- Toll, Thomas A. and Ivey, Margaret F.:
 Wind-Tunnel Investigation of a Rectangular NACA 2212 Airfoil with
 Semispan Ailerons and with Nonperforated, Balanced Double Split
 Flaps for Use as Aerodynamic Brakes.
 ARR L5B17 (WR L-56), April 1945.
- Stevens, Victor I., Jr.; McCullough, George B. and Hanson, Frederick H.: An Experimental Investigation of the Effect of Propellers Used as Aerodynamic Brakes on Stability and Control. ARR 5C01 (WR A-19), July 1945.
- Schneiter, Leslie E. and Watson, James M.: Low-Speed Wind-Tunnel Investigation of Various Plain-Spoiler Configurations for Lateral Control on a 42° Sweptback Wing. TN 1646, June 1948.
- Fischel, Jack and Watson, James M.: Investigation of Spoiler Ailerons for Use as Speed Brakes or Glide-Path Controls on Two NACA 65-Series Wings Equipped with Full-Span Slotted Flaps. TN 1933, Aug. 1949.

HINGE MOMENTS (1.8.2.5)

- Von Heidelberg: Measurements of Rudder Moments on an Airplane During Flight. TN 38, Jan. 1921.
- Bacon, David L.: The Distribution of Lift over Wing Tips and Ailerons. Rept. 161, 1923.
- Smith, R. H.: Lift, Drag, and Elevator Hinge Moments of Handley-Page Control Surfaces. Rept. 278, 1927.
- Monish, B. H.: Effect of Variation of Chord and Span of Ailerons on Hinge Moments at Several Angles of Pitch. Rept. 370, 1930.
- Heald, R. H.: Rolling, Yawing, and Hinge Moments Produced by Rectangular Ailerons (Correlating Repts. Nos. 298, 343, 390). TN 441, Jan. 1933.
- Hubner, Walter: The Effect of a Gap Between Elevator and Stabilizer on the Static Stability and Maneuverability about the Lateral Axis in Flight. TM 701, March 1933.
- Soulé, H. A. and McAvoy, W. H.: Flight Investigation of Lateral Control Devices for Use with Full-Span Flaps. Rept. 517, 1935.
- Harris, Thomas A.: Reduction of Hinge Moments of Airplane Control Surfaces by Tabs. Rept. 528, 1935.
- Wenzinger, Carl J.: Pressure Distribution over an Airfoil Section with a Flap and Tab. Rept. 574, 1936.
- Weick, Fred E. and Jones, Robert T.: Résumé and Analysis of NACA Lateral Control Research. Rept. 605, 1937.
- Wenzinger, Carl J.: Wind-Tunnel Investigation of Tapered Wings with Ordinary Ailerons and Partial-Span Split Flpas. Rept. 611, 1937.
- McAvoy, William H.: Maximum Forces Applied by Pilots to Wheel-Type Controls. TN 623, Nov. 1937.
- Wenzinger, Carl J.: Pressure Distribution over an NACA 23012 Airfoil with an NACA 23012 External-Airfoil Flap. Rept. 614, 1938.
- Allen, H. Julian: Calculation of the Chordwise Load Distribution over Airfoil Sections with Plain, Split, or Serially-Hinged Trailing-Edge Flaps. Rept. 634, 1938.

- Hinge Moments Control (Cont.)
- Soulé, H. A. and Gracey, W.: Improvement of Aileron Effectiveness by the Prevention of Air Leakage Through the Hinge Gap as Determined in Flight. TN 632, Jan. 1938.
- Wenzinger, Carl J. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Rectangular and Tapered NACA 23012 Wings with Plain Ailerons and Full-Span Split Flaps. TN 661, Aug. 1938.
- Goett, Harry J. and Reeder, J. P.: Effects of Elevator Nose Shape, Gap, Balance, and Tabs on the Aerodynamic Characteristics of a Horizontal Tail Surface. Rept. 675, 1939.
- Silverstein, Abe and Katzoff, S.: Aerodynamic Characteristics of Horizontal Tail Surfaces. Rept. 688, 1940.
- Martinov, A. and Kolosov, E.: Some Data on the Static Longitudinal Stability and Control of Airplanes (Design of Control Surfaces). TM 941, May 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23021 Airfoil with a Slotted and a Split Flap. Rept. 718, 1941.
- Ames, Milton B., Jr. and Sears, Richard I.: Determination of Control-Surface Characteristics from NACA Plain-Flap and Tab Data. Rept. 721, 1941.
- Ames, Milton B., Jr. and Sears, Richard I.: Determination of Control-Surface Characteristics from NACA Plain-Flap and Tab Data. TN 796, Feb. 1941.
- Harris, Thomas A. and Purser, Paul E.: Wind-Tunnel Investigation of Plain Ailerons for a Wing with a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Retractable Slit Flap. ACR (WR L-317), March 1941.
- Rogallo, F. M.: Aerodynamic Characteristics of a Slot-Lip Aileron and Slotted Flap for Dive Brakes. ACR (WR L-337), April 1941.
- Rogallo, Francis M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Plain and Slot-Lip Aileron on a Wing with a Full-Span Slotted Flap. ACR (WR L-375), April 1941.

- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics I Effect of Gap on the Aerodynamic Characteristics of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap. ARR (WR L-377), June 1941.
- Rogallo, F. M. and Schuldenfrei, Marvin: Wind-Tunnel Investigation of a Plain and a Slot-Lip Aileron on a Wing with a Full-Span Flap Consisting of an Inboard Fowler and an Outboard Slotted Flap. ARR, June 1941.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. II A Large Aerodynamic Balance of Various Nose Shapes with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-380), Aug. 1941.
- Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. III A Small Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-301), Aug. 1941.
- Ames, Milton B., Jr. and Eastman, Donald R., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. IV A Medium Aerodynamic Balance of Various Nose Shapes Used with a 30-Percent-Chord Flap on an NACA 0009 Airfoil. ARR (WR L-355), Sept. 1941.
- Rogallo, Francis M. and Swanson, Robert S.: Wind-Tunnel Development of a Plug-Type Spoiler-Slot Aileron for a Wing with a Full-Span Slotted Flap and a Discussion of Its Application. ARR (WR L-420), Nov. 1941.
- Rogallo, F. M. and Purser, Paul E.: Wind-Tunnel Investigation of 20-Percent-Chord Plain and Frise Ailerons on an NACA 23012 Airfoil. ARR (WR L-374), Dec. 1941.
- Rogallo, F. M. and Spano, Bartholomew S.: Wind-Tunnel Investigation of a Spoiler-Slot Aileron on an NACA 23012 Airfoil with a Full-Span Fowler Flap. ARR (WR L-376), Dec. 1941.
- Jones, Robert T. and Cohen, Doris: Determination of Optimum Plan Forms for Control Surfaces. Rept. 731, 1942.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Characteristics of Plain and Balanced Elevators on a Typical Pursuit Fuselage at Attitudes Simulating Normal-Flight and Spin Conditions. ARR (WR L-379), March 1942.

- Hinge Moments Control (Cont.)
- Jones, Robert T. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. V The Use of a Beveled Trailing Edge to Reduce the Hinge Moment of a Control Surface. ARR (WR L-464), March 1942.
- Underwood, William J. and Abbott, Frank T., Jr.: Test of NACA 66, 2-116 a = 0.6 Airfoil Section Fitted with Pressure Balanced and Slotted Flaps for the Wing of the XP-63 Airplane. MR (WR L-701), May 1942.
- Sears, Richard I.: Application of Balancing Tabs to Ailerons. RB (WR L-346), June 1942.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. VI A 30Percent-Chord Plain Flap on the NACA
 0015 Airfoil. ARR (WR L-454), June
 1942.
- Lowry, John G. and Liddell, Robert B.:
 Wind-Tunnel Investigation of a Tapered
 Wing with a Plug-Type Spoiler-Slot
 Aileron and Full-Span Slotted Flaps.
 ARR (WR L-250), July 1942.
- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. IX Some Analytical Considerations and Experimental Test Results for an Internally Balanced Flap. ARR (WR L-339), July 1942.
- Sears, Richard I. and Gillis, Clarence L.:
 Wind-Tunnel Investigation of Control
 Surface Characteristics. VIII A
 Large Aerodynamic Balance of Two
 Nose Shapes Used with a 30-Percent
 Chord Flap on an NACA 0015 Airfoil.
 ARR (WR L-378), July 1942.
- Pass, H. R.: Wind-Tunnel Study of the Effects of Propeller Operation and Flap Deflection on the Pitching Moments and Elevator Hinge Moments of a Single-Engine Pursuit-Type Airplane. ARR (WR L-411), July 1942.
- Sears, Richard I. and Hoggard, H. Page,
 Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. VII A Medium Aerodynamic Balance of Two
 Nose Shapes Used with a 30-PercentChord Flap on an NACA 0015 Airfoil.
 ARR (WR L-448), July 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of a Plain Aileron and a Balanced Aileron on a Tapered Wing with Full-Span Duplex Flaps. ARR (WR L-481), July 1942.

- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. X A 30-Percent-Chord Plain Flap with Straight Contour on the NACA 0015 Airfoil. ARR (WR L-366), Sept. 1942.
- Rogallo, F. M. and Purser, Paul E.:
 Wind-Tunnel Investigation of a Plain
 Aileron with Various Trailing-Edge
 Modifications on a Tapered Wing.
 I Aileron with Fixed Inset Tabs.
 ARR (WR L-513), Sept. 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Development of Ailerons for the Curtiss XP-60 Airplane. ACR, Sept. 1942.
- Langley Memorial Aeronautical Laboratory: British Drawings of "G" Restrictors and Control Booster. CB, Oct. 1942.
- Underwood, William J.: Aerodynamic Characteristics for Internal-Balance and Frise Type Ailerons on an NACA 6 Series Low-Drag Tip Section of the Wing for the XP-63 Airplane. MR (WR L-645), Oct. 1942.
- Graham, Robert R. and Ashworth, C. Dixon: Tests in the 19-Foot Pressure Tunnel of a 1/2.75-Scale Model of the F4U-1 Airplane with Several Balanced Elevators Full-Span Flaps, and Dropable Gas Tank. ACR, Oct. 1942.
- Rogallo, F. M. and Purser, Paul E.:
 Wind-Tunnel Investigation of a Plain
 Aileron with Various Trailing-Edge
 Modifications on a Tapered Wing.
 II Ailerons with Thickened and
 Beveled Trailing Edges. ARR
 (WR L-228), Oct. 1942.
- Seidman, Oscar and Klinar, J. W.: Elevator Stick Forces in Spins as Computed from Wind-Tunnel Measurements. ARR (WR L-422), Oct. 1942.
- Sivells, James C.: Tests in the 19-Foot Pressure Tunnel of a Rectangular NACA 0012 Horizontal Tail Plane with Plain and Horn-Balanced Elevators. ARR, Oct. 1942.
- Gillis, Clarence L.: Characteristics of Beveled-Trailing-Edge Elevators on a Typical Pursuit Fuselage at Attitudes Simulating Normal Flight and Spin Conditions. ARR (WR L-391), Dec. 1942.
- Ganzer, Victor M.: High-Speed Wind-Tunnel Tests of a 1/6-Scale Model of a Twin-Engine Pursuit Airplane. MR (WR A-91), Dec. 1942.

- Hinge Moments Control (Cont.)
- Sears, Richard I. and Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XI - Various Large Overhang and Internal-Type Aerodynamic Balances for a Straight-Contour Flap on the NACA 0015 Airfoil. ARR (WR L-447), Jan. 1943.
- Rogallo, F. M. and Purser, Paul E.:
 Wind-Tunnel Investigation of a Plain
 Aileron with Various Trailing-Edge
 Modifications on a Tapered Wing.
 III Ailerons with Simple and SpringLinked Balancing Tabs. ARR (WR
 L-470), Jan. 1943.
- Hoggard, H. Page, Jr.: Wind-Tunnel Investigation of Control-Surface Characteristics. XII Various Cover-Plate Alinements on the NACA 0015 Airfoil with a 30-Percent-Chord Flap and Large Sealed Internal Balance. ARR (WR L-511), Jan. 1943.
- Purser, Paul E. and McKee, John W.: Wind-Tunnel Investigation of a Plain Aileron with Thickened and Beveled Trailing Edges on a Tapered Low-Drag Wing. ACR (WR L-526), Jan. 1943.
- McKee, John W. and Liddell, Robert B.: Wind-Tunnel Investigation of a Revised Horizontal Tail Surface for the Grumman TBF-1 Airplane. MR (WR L-702), Feb. 1943.
- Purser, Paul E. and Toll, Thomas A.: Wind-Tunnel Investigation of the Characteristics of Blunt-Nose Ailerons on a Tapered Wing. ARR (WR L-262), Feb. 1943.
- Rogallo, F. M. and Lowry, John G.: Résumé of Data for Internally Balanced Ailerons. RB, March 1943.
- Phillips, W. H.: Effect of Fabric Deflection on Control Characteristics. RB, March 1943.
- Rogallo, F. M. and Crandall, Stewart M.: Wind-Tunnel Investigation of Trimming Tabs on a Thickened and Beveled Aileron on a Tapered Low-Drag Wing. ACR (WR L-435), March 1943.
- Fehlner, Leo F.: A Study of the Effects of Radii of Gyration and Altitude on Aileron Effectiveness at High Speed. RB 3D26 (WR L-249), April 1943.
- Purser, Paul E. and Gillis, Clarence L.:
 Preliminary Correlation of the Effects
 of Beveled Trailing Edges on the HingeMoment Characteristics of Control
 Surfaces. CB 3E14, May 1943.

- Lowry, John G.: Resume of Hinge-Moment Data for Unshielded Horn-Balanced Control Surfaces. RB 3F19 (WR L-169), June 1943.
- Letko, W.; Denaci, H. G. and Freed, C.:
 Wind-Tunnel Tests of Ailerons at Various Speeds. I Ailerons of 0.20 Airfoil Chord and True Contour with 0.35
 Aileron-Chord Extreme Blunt Nose
 Balance on the NACA 66,2-216 Airfoil.
 ACR 3F11 (WR L-431), June 1943.
- Denaci, H. G. and Bird, J. D.: Wind-Tunnel Tests of Ailerons at Various Speeds.
 II Ailerons of 0.20 Airfoil Chord and True Contour with 0.60 Aileron-Chord Sealed Internal Balance on the NACA 66,2-216 Airfoil. ACR 3F18 (WR L-432), June 1943.
- Gillis, Charence L. and Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XIII Various Flap Overhangs Used with a 30-Percent-Chord Flap on an NACA 66-009 Airfoil. ACR 3G20 (WR L-314), July 1943.
- Rogallo, F. M.; Lowry, John G. and Fischel, Jack: Wind-Tunnel Investigation of a Full-Span Retractable Flap in Combination with Full-Span Plain and Internally Balanced Ailerons on a Tapered Wing. ARR 3H23 (WR L-506), Aug. 1943.
- Letko, W. and Kemp, W. B.: Wind-Tunnel Tests of Ailerons at Various Speeds. III - Ailerons of 0.20 Airfoil Chord and True Contour with 0.35-Aileron-Chord Frise Balance on the NACA 23012 Airfoil. ACR 3I14 (WR L-325), Sept. 1943.
- Letko, W. and Denaci, H. G.: Wind Tunnel Tests of Ailerons at Various Speeds. V - Pressure Distributions over the NACA 66,2-216 and NACA 23012 Airfoils with Various Balances on 0.20-Chord Ailerons. ACR 3K05 (WR L-434), Nov. 1943.
- Bird, J. D. and Mendelsohn, Robert A.: Wind-Tunnel Tests of a Piston-Type Control Booster on an Airfoil and Aileron Model. RB 3K15 (WR L-494), Nov. 1943.
- Swanson, Robert S. and Gillis, Clarence L.: Limitations of Lifting-Line Theory for Estimation of Aileron Hinge-Moment Characteristics. CB 3L02 (WR L-281), Dec. 1943.
- Sears, Richard I.: Wind-Tunnel Data on the Aerodynamic Characteristics of Airplane Control Surfaces, ACR 3L08 (WR L-663), Dec. 1943.

Hinge Moments - Control (Cont.)

- Purser, Paul E. and Riebe, John M.: Wind-Tunnel Investigation of Control-Surface Characteristics. XV - Various Contour Mcdifications of a 0.30-Airfoil-Chord Plain Flap on an NACA 66(215)-014 Airfoil. ACR 3L20 (WR L-668), Dec. 1943.
- Cohen, Doris: A Theoretical Investigation of the Rolling Oscillations of an Airplane with Ailerons Free. Rept. 787, 1944.
- Jones, Robert T. and Greenberg, Harry: Effect of Hinge-Moment Parameters on Elevator Stick Forces in Rapid Maneuvers. Rept. 798, 1944.
- Crane, Robert M. and Holtzclaw, Ralph W.: Wind-Tunnel Investigation of the Effects of Profile Modifications and Tabs on the Characteristics of Ailerons on a Low-Drag Airfoil. Rept. 803, 1944.
- Rogallo, F. M.: Collection of Balanced-Aileron Test Data. ACR 4A11 (WR L-419), Jan. 1944.
- Imlay, Frederick H. and Bird, J. D.: Wind-Tunnel Tests of Hinge-Moment Characteristics of Spring-Tab Ailerons. ARR 4A26 (WR L-318), Jan. 1944.
- Sears, Richard I. and Liddell, Robert B.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XVIII A
 Linked Overhang Aerodynamic Balance.
 ACR 4B28 (WR L-350), Feb. 1944.
- Jones, R. T. and Underwood, W. J.: Wind-Tunnel Investigation of a Beveled Aileron Shape Designed to Increase the Useful Deflection Range. MR (WR L-651), April 1944.
- Hoggard, H. Page, Jr. and Bulloch, Marjorie E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVI -Pressure Distribution over an NACA 0009 Airfoil with 0.30-Airfoil-Chord Beveled-Trailing-Edge Flaps. ARR L4D03 (WR L-205), April 1944.
- Lockwood, Vernard E.: Wind-Tunnel Investigation of Control-Surface Characteristics. XVII Beveled-Trailing-Edge Flaps of 0.20, 0.30, and 0.40 Airfoil Chord on an NACA 0009 Airfoil. ACR L4D12 (WR L-666), April 1944.
- Purser, Paul E. and Toll, Thomas A.: Analysis of Available Data on Control Surfaces Having Plain-Overhang and Frise Balances. ACR L4E13 (WR L-665), May 1944.

- Murray, Harry E. and Warren, S. Anne: Effect of Changes in Aileron Rigging on the Stick Forces of a High-Speed Fighter Airplane. RB L4E11 (WR L-289), May 1944.
- Weil, Joseph and Wells, Evalyn G.:
 Wind-Tunnel Tests of the 1/8-Scale
 Powered Model of the Curtiss XBTC-2
 Airplane. I Preliminary Investigation of Longitudinal Stability. MR
 (WR L-667), June 1944.
- Liddell, Robert B.: Wind-Tunnel Investigation of Control-Surface Characteristics. XIX - A Double Flap with an Overhang and an Internal Aerodynamic Balance. ACR L4F23 (WR L-215), June 1944.
- Wallace, Arthur R.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. II Preliminary Investigation of Lateral Stability and Control. MR (WR L-787), Aug. 1944.
- Spooner, Stanley H.; Ashworth, C. Dixon and Russell, Robert T.: Tests of a 0.30-Scale Semispan Model of the Douglas XTB2D-1 Airplane Wing and Fuselage Combination in the NACA 19-Foot Pressure Tunnel. II Roll-Flap Positioning and Lateral-Control Investigation. MR (WR L-564), Sept. 1944.
- Hall, Charles F. and Mannes, Robert L.: Longitudinal Characteristics and Aileron Effectiveness of the XB-42 Airplane from High-Speed Wind-Tunnel Tests. MR (WR A-84), Sept. 1944.
- Garner, I. Elizabeth: Wind-Tunnel Investigation of Control-Surface Characteristics. XX Plain and Balanced Flaps on an NACA 0009 Rectangular Semispan Tail Surface. ARR L4I11f (WR L-186), Oct. 1944.
- Liddell, Robert B. and Lockwood, Vernard E.: Wind-Tunnel Investigation of Rounded Horns and of Guards on a Horizontal Tail Surface. ARR L4J16 (WR L-60), Oct. 1944.
- Becker, John V. and Korycinski, Peter F.:
 Aerodynamic Tests of a Full-Scale
 TBF-1 Aileron Installation in the
 Langley 16-Foot High-Speed Tunnel.
 ARR L4K22 (WR L-31), Dec. 1944.
- Erickson, Albert L. and Nelson, Warren H.: High-Speed Wind-Tunnel Tests of Semispan Horizontal Tails for a Bomber Airplane. MR A4L18 (WR A-83), Dec. 1944.

- Hinge Moments Control (Cont.)
- Goranson, R. Fabian: Measurement of Individual Aileron Hinge Moments and Aileron Control Characteristics of a P-40F Airplane. MR L5A29a (WR L-649), Jan. 1945.
- Harmon, S. M.: Determination of the Effect of Horizontal-Tail Flexibility on Longitudinal Control Characteristics. ACR L5B01 (WR L-45), Feb. 1945.
- Bird, J. D.: Wind-Tunnel Tests of a Blunt-Nose Aileron with Beveled Trailing Edge on an NACA 66(215)-216 Airfoil with Several Modifications of Aileron Nose and Adjacent Airfoil Contour. ACR L5B10 (WR L-105), Feb. 1945.
- Phillips, William H.: The Use of Geared Spring Tabs for Elevator Control. RB L5A13 (WR L-30), Feb. 1945.
- Riebe, John M. and Church, Oleta: Wind-Tunnel Investigation of Control-Surface Characteristics. XXI - Medium and Large Aerodynamic Balances of Two Nose Shapes and a Plain Overhang Used with a 0.40-Airfoil-Chord Flap on an NACA 0009 Airfoil. ARR L5C01 (WR L-175), March 1945.
- Williams, Walter C.: Flight Tests of a Rudder with a Spring Tab on an F6F-3 Airplane (BuAer No. 04776). MR L5C19 (WR L-718), March 1945.
- Underwood, William J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of Spoiler Aileron Flap Model for the Hughes XF-11 Airplane. MR L5C29 (WR L-644), April 1945.
- Purser, Paul E. and McKinney, Elizabeth G.: Comparison of Pitching Moments Produced by Plain Flaps and by Spoilers and Some Aerodynamic Characteristics of an NACA 23012 Airfoil with Various Types of Aileron. ACR L5C24a (WR L-124), April 1945.
- Neihouse, Anshal I. and Kemp, W. B.: Effect of Fabric Deflection on Rudder Hinge-Moment Characteristics as Determined by Wind-Tunnel Tests. ARR L5A24, April 1945.
- White, Maurice D. and Reeder, John P.: Flight Investigation of Modifications to Improve the Elevator Control-Force Characteristics of the Curtiss SB2C-1C Airplane in Maneuvers. TED No. NACA 2333. MR L5D04a (WR L-719), April 1945.
- Crane, Robert M.: Computation of Hinge-Moment Characteristics of Horizontal Tails from Section Data. CB 5B05 (WR A-11), April 1945.

- Toll, Thomas A. and Ivey, Margaret F.:
 Wind-Tunnel Investigation of a Rectangular NACA 2212 Airfoil with Semispan Ailerons and with Non-perforated, Balanced Double Split Flaps for Use as Aerodynamic Brakes. ARR L5B17 (WR L-56), April 1945.
- Hamilton, William T. and Boddy, Lee E.: High Speed Wind Tunnel Tests of a 0.3-Scale Model of the P-47D Airplane. ACR A5D20, May 1945.
- Schueller, Carl F.; Korycinski, Peter F. and Strass, H. Kurt: Effect of Elevator-Profile Modifications and Trailing-Edge Strips on Elevator Hinge-Moment and Other Aerodynamic Characteristics of a Full-Scale Horizontal Tail Surface. CB L5F01 (WR L-111), June 1945.
- Schueler, Carl F. and Korycinski, Peter F.: Effect of Fabric Deflection at High Speeds on the Aerodynamic Characteristics of the Horizontal Tail Surface of an SB2D-1 Airplane. ARR L5F01a (WR L-170), June 1945.
- Riebe, John M. and McKinney, Elizabeth G.:
 Wind-Tunnel Investigation of ControlSurface Characteristics. XXII Medium
 and Large Aerodynamic Balances of
 Two Nose Shapes and a Plain Overhang
 Used with a 0.20-Airfoil-Chord Flap on
 an NACA 0009 Airfoil. ARR L5F06
 (WR L-196), June 1945.
- Bird, J. D.: Effect of Leakage Past Aileron Nose on Aerodynamic Characteristics of Plain and Internally Balanced Ailerons on NACA 66 (215)-216, a = 1.0 Airfoil. ACR L5F13a (WR L-172), July 1945.
- Goodson, Kenneth W. and Silvers, H.
 Norman: Wind-Tunnel Tests of the 0.15Scale Powered Model of the Fleetwings
 XBTK-1 Airplane. III Lateral Stability and Control TED No. NACA 2332.
 MR L5F20 (WR L-786), July 1945.
- Swanson, Robert S. and Priddy, E. LaVerne: Lifting-Surface-Theory Values of the Damping in Roll and of the Parameter Used in Estimating Aileron Stick Forces. ARR L5F23 (WR L-53), Aug. 1945.
- Murray, Harry E. and Erwin, Mary A.:
 Hinge Moments of Sealed-InternalBalance Arrangements for Control
 Surfaces. I Theoretical Investigation.
 ARR L5F30 (WR L-174), Aug. 1945.
- Spearman, M. Leroy: Wind-Tunnel Investigation of Control-Surface Characteristics. XXIII A 0.25-Airfoil-Chord Flap with Tab Having a Chord Twice the Flap Chord on an NACA 0009 Airfoil. ARR L5G25 (WR L-47), Sept. 1945.

- Hinge Moments Control (Cont.)
- McCormack, Gerald M.: Tests of an Attack-Type Airplane in the Ames 40 x 80 Foot Wind-Tunnel to Improve the High-Speed Maneuvering Control-Forces Characteristics. MR A5K16 (WR A-2), Dec. 1945.
- Ashkenas, I. L.: The Development of a Lateral-Control System for Use with Large-Span Flaps. TN 1015, Jan. 1946.
- Lindsey, W. F.: Effect of Compressibility on the Pressures and Forces Acting on a Modified NACA 65,3-019 Airfoil Having a 0.20-Chord Flap. ACR L5G31a (WR L-76), Jan. 1946.
- Tamburello, Vito; Smith, Bernard J. and Silvers, H. Norman: Wind-Tunnel Investigation of Control-Surface Characteristics of Plain and Balanced Flaps on an NACA 0009 Elliptical Semispan Wing. ARR L5L18 (WR L-41), Feb. 1946.
- Becker, John V. and Cooper, Morton: Structural Hinge-Moment Increments Caused by Hinge-Axis Distortion. TN 1038, April 1946.
- Murray, Harry E.: Wind-Tunnel Investigation of End-Plate Effects of Horizontal Tails on a Vertical Tail Compared with Available Theory. TN 1050, April 1946.
- Crandall, Stewart M. and Murray, Harry E.: Analysis of Available Data on the Effects of Tabs on Control-Surface Hinge Moments. TN 1049, May 1946.
- Luoma, Arvo A.: Effect of Compressibility on Section Characteristics of an Airfoil with a Round-Nose Slotted Frise Aileron. TN 1075, May 1946.
- Phillips, William H.: An Investigation of Additional Requirements for Satisfactory Elevator Control Characteristics. TN 1060, June 1946.
- Lowry, John G.; Turner, Thomas R. and Liddell, Robert B.: Aerodynamic Characteristics of Several Modifications of a 0.45-Scale Model of the Vertical Tail of the Curtiss XP-62 Airplane. MR L6F27 (WR L-736), July 1946.
- Robinson, Robert C. and Perone, Angelo: The High-Speed Longitudinal Stability and Control of the Bell P-39N-1 Airplane as Calculated from Propeller-Off Tests of a 0.35-Scale Model. RM A6L27, Jan. 1947.
- Spohr, J. Richard: Lateral-Control Characteristics of Various Spoiler Arrangements as Measured in Flight. TN 1123, Jan. 1947.

- Brown, Harvey R. and Clousing, Lawrence A.: Wing Pressure-Distribution Measurements up to 0.866 Mach Number in Flight on a Jet-Propelled Airplane. TN 1181, March 1947.
- Purser, Paul E. and Cook, Charles B.: Collection and Analysis of Hinge-Moment Data on Control-Surface Tabs. TN 1113, April 1947.
- Bates, William R.: Collection and Analysis of Wind-Tunnel Data on the Characteristics of Isolated Tail Surfaces with and Without End Plates. TN 1291, May 1947.
- Toll, Thomas A.; Queijo, M. J. and Brewer, Jack D.: Wind-Tunnel Investigation of the Effects of Surface-Covering Distortion on the Characteristics of a Flap Having Undistorted Contour Maintained for Various Distances Ahead of the Trailing Edge. TN 1296, May 1947.
- Wallace, Arthur R. and Comenzo, Raymond J.: Effect of Engine Skew on Directional and Lateral Control Characteristics of Single-Engine Airplanes. RM L6I16, May 1947.
- MacLachlan, Robert and Letko, William: Correlation of Two Experimental Methods of Determining the Rolling Characteristics of Unswept Wings. TN 1309, May 1947.
- Schueller, Carl F.: Pressure-Distribution Measurements on a Full-Scale Horizontal Tail Surface for a Mach Number Range of 0.20 to 0.70. RM L7D08, June 1947.
- Braslow, Albert L.: Two-Dimensional Wind-Tunnel Investigation of a 10.7-Percent-Thick Symmetrical Tail Section with a 0.40 Airfoil-Chord Control Surface and a 0.20 Control-Surface-Chord Tab. TN 1228, June 1947.
- Tamburello, Vito and Weil, Joseph: Wind-Tunnel Investigation of the Effect of Power and Flaps on the Static Lateral Characteristics of a Single-Engine Low-Wing Airplane Model. TN 1327, June 1947.
- Deters, Owen J.: Estimation of Control Forces of Spring-Tab Ailerons from Wind-Tunnel Data. TN 1333, June 1947.
- Stone, Ralph W., Jr. and Burk, Sanger M., Jr.: Effect of Horizontal-Tail Position on the Hinge Moments of an Unbalanced Rudder in Attitudes Simulating Spin Conditions. TN 1337, June 1947.

- Hinge Moments Control (Cont.)
- Lowry, John G. and Crandall, Stewart M.: Wind-Tunnel Investigation of Unshielded Horn Balances on a Horizontal Tail Surface. TN 1377, July 1947.
- Hall, Charles F.: The Effect of Modifications to the Horizontal-Tail Profile on the High-Speed Longitudinal Control of a Pursuit Airplane. TN 1302, Aug. 1947.
- Stone, Ralph W., Jr. and Burk, Sanger M., Jr.: Hinge-Moment Characteristics of Balanced Elevator and Rudder for a Specific Tail Configuration on a Fuselage in Spinning Attitudes. TN 1400, Aug. 1947.
- Brewer, Jack D. and Queijo, M. J.: Wind-Tunnel Investigation of the Effect of Tab Balance on Tab and Control-Surface Characteristics. TN 1403, Aug. 1947.
- Stevenson, David B. and Byrne, Robert W.:
 High-Speed Wind-Tunnel Tests of an
 NACA 16-009 Airfoil Having a 32.9Percent-Chord Flap with an Overhang
 20.7 Percent of the Flap Chord. TN
 1406, Aug. 1947.
- Deters, Owen J. and Russell, Robert T.: Investigation of a Spoiler-Type Lateral Control System on a Wing with Full-Span Flaps in the Langley 19-Foot Pressure Tunnel. TN 1409, Aug. 1947.
- Jones, Arthur L.; Flanagan, Mildred G. and Sluder, Loma: An Application of Lifting-Surface Theory to the Prediction of Angle-of-Attack Hinge-Moment Parameters for Aspect Ratio 4.5 Wings. TN 1420, Aug. 1947.
- Stevenson, David B. and Adler, Alfred A.:
 High-Speed Wind-Tunnel Tests of an
 NACA 0009-64 Airfoil Having a 33.4Percent-Chord Flap with an Overhang
 20.1 Percent of the Flap Chord. TN
 1417, Sept. 1947.
- Deters, Owen J.: Comparison of the Control-Force Characteristics of Two Types of Lateral-Control System for Large Airplanes. TN 1441, Sept. 1947.
- Fischel, Jack and Schneiter, Leslie E.: High-Speed Wind-Tunnel Investigation of High-Lift and Aileron-Control Characteristics of an NACA 65-210 Semispan Wing. TN 1473, Nov. 1947.
- Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.

- Jones, Arthur L. and Sluder, Loma: An Application of Falkner's Surface-Loading Method to Prediction of Hinge-Moment Parameters for Swept-back Wings. TN 1506, Feb. 1948.
- Cleary, Joseph W. and Krumm, Walter J.: High-Speed Aerodynamic Characteristics of Horn and Overhang Balances on a Full-Scale Elevator. RM A7H29, Feb. 1948.
- Frick, Charles W., Jr.: Application of the Linearized Theory of Supersonic Flow to the Estimation of Control-Surface Characteristics. TN 1554, March 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. I - Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 3. RM A7K24, April 1948.
- Brewer, Jack D. and Polhamus, Josephine F.: Wind-Tunnel Investigation of the Boundary Layer on an NACA 0009 Airfoil Having 0.25- and 0.50-Airfoil Chord Plain Sealed Flaps. TN 1574, April 1948.
- Fischel, Jack and Ivey, Margaret F.: Collection of Test Data for Lateral Control with Full-Span Flaps. TN 1404, April 1948.
- Visconti, Fioravante: Investigation of an Approximately 0.178-Chord-Thick NACA 6-Series-Type Airfoil Section Equipped with Sealed Internally Balanced 0.20-Chord Ailerons and with a 0.05-Chord Tab. TN 1590, May 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. II Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 4.5. RM A8B11, June 1948.
- Tucker, Warren A.: Notes on Geared Tabs at Supersonic Speeds. RM L7L04, July 1948.
- Tucker, Warren A. and Nelson, Robert L.: Characteristics of Thin Triangular Wings with Constant-Chord Partial-Span Control Surfaces at Supersonic Speeds. TN 1660, July 1948.
- Fischel, Jack and Schneiter, Leslie E.:
 High-Speed Wind-Tunnel Investigation
 of an NACA 65-210 Semispan Wing
 Equipped with Plug and Retractable
 Ailerons and a Full-Span Slotted
 Flap. TN 1663, July 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.

- Hinge Moments Control (Cont.)
- Tucker, Warren A. and Nelson, Robert L.: Theoretical Characteristics in Supersonic Flow of Constant-Chord Partial-Span Control Surfaces on Rectangular Wings Having Finite Thickness. TN 1708, Sept. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Toll, Thomas A. and Schneiter, Leslie E.:
 Approximate Relations for HingeMoment Parameters of Control Surfaces on Swept Wings at Low Mach
 Numbers. TN 1711, Oct. 1948.
- Schneiter, Leslie E. and Naeseth, Rodger
 L.: Wind-Tunnel Investigation at Low
 Speed of the Lateral Control Characteristics of Ailerons Having Three
 Spans and Three Trailing-Edge Angles
 on a Semispan Wing Model. TN 1738,
 Nov. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. III - Unswept and 35° Swept-Back Plan Forms of Aspect Ratio 6. RM A8H30, Dec. 1948.
- Dods, Jules B., Jr.: Wind-Tunnel Investigation of Horizontal Tails. IV Unswept Plan Form of Aspect Ratio 2 and a Two-Dimensional Model. RM A8J21, Dec. 1948.
- Mungall, Robert G.: Flight Investigation of a Combined Geared Unbalancing-Tab and Servotab Control System as Used with an All-Movable Horizontal Tail. TN 1763, Dec. 1948.
- Luoma, Arvo A.: An Investigation of the Section Characteristics of Plain Unsealed Ailerons on an NACA 66,1-115 Airfoil Section in the Langley 8-Foot High-Speed Tunnel. TN 1596, Jan. 1949.
- Fischel, Jack: Wind-Tunnel Investigation of an NACA 65-210 Semispan Wing Equipped with Circular Plug Ailerons and a Full-Span Slotted Flap. TN 1802, Jan. 1949.
- Braslow, Albert L. and Visconti,
 Fioravante: Two-Dimensional WindTunnel Investigation of Two NACA
 7-Series Type Airfoils Equipped with
 a Slot-Lip Aileron, Trailing-Edge
 Frise Aileron, and a Double Slotted
 Flap. RM L9B23, March 1949.

- Gothert and Rober: Systematic Investigations of the Effects of Plan Form and Gap Between the Fixed Surface and Control Surface on Simple Flapped Wings. TM 1206, May 1949.
- Lange, Roy H.; Cocke, Bennie W., Jr. and Proterra, Anthony J.: Preliminary Full-Scale Investigation of a 1/3-Scale Model of a Convertible-Type Airplane. RM L9C29, June 1949.
- Nuber, Robert J. and Fullmer, Felicien F., Jr.: Two-Dimensional Wind-Tunnel Investigation of a Symmetrical Airfoil Section with a Sealed Internally Balanced Control Surface and a Leading Tab. RM L9E27, July 1949.

CONTROL - AUTOMATIC (1.8.2.6)

- Sternfield, Leonard: Effect of Automatic Stabilization on the Lateral Oscillatory Stability of a Hypothetical Airplane at Supersonic Speeds. TN 1818, March 1949.
- Ernst, G. and Kramer, M.: Development of Spoiler Controls for Remote Control of Flying Missiles. TM 1210, March 1949.
- Jones, Robert T. and Sternfield, Leonard: A Method for Predicting the Stability in Roll of Automatically Controlled Aircraft Based on the Experimental Determination of the Characteristics of an Automatic Pilot. TN 1901, June 1949.

SPINNING

(1.8.3)

- Reid, H. J. E.: A Study of Airplane Maneuvers with Special Reference to Angular Velocities. Rept. 155, 1922.
- Anderlik, E.: Experiments on Autorotation. TM 380, Sept. 1926.
- Knight, Montgomery: Wind Tunnel Tests on Autorotation and the "Flat Spin." Rept. 273, 1927.
- Jones, B. Melvill: Research on the Control of Airplanes. TM 485, Oct. 1928.
- Herrmann, H.: Analysis of Flight and Wind-Tunnel Tests on Udet Airplanes with Reference to Spinning Characteristics. TM 502, March 1929.
- Ober, Shatswell: Some Experiments on Autorotation of an Airfoil. TN 319, Sept. 1929.

- Spinning (Cont.)
- Knight, Montgomery and Wenzinger, Carl J.: The Effect of Wing Tip Floating Ailerons on the Autorotation of a Monoplane Wing Model. TN 336, March 1930.
- Schrenk, Oskar: A Possible Method for Preventing the Autorotation of Airplane Wings. TM 569, June 1930.
- Fuchs, R.: Mathematical Treatise on the Recovery from a Flat Spin. TM 591, Nov. 1930.
- Von Baranoff, A. and Hopf, L.: Combined Pitching and Yawing Motion of Airplanes. TM 620, May 1931.
- Fuchs, Richard and Schmidt, Wilhelm: The Dangerous Flat Spin and the Factors Affecting It. TM 629, July 1931.
- Fuchs, Richard and Schmidt, Wilhelm: The Steady Spin. TM 630, July 1931.
- Scudder, Nathan F.: A Flight Investigation of the Spinning of the NY-1 Airplane with Varied Mass Distribution and Other Modifications, and an Analysis Based on Wind-Tunnel Tests. Rept. 441, 1932.
- Scudder, N. F. and Miller, M. P.: The Nature of Air Flow About the Tail of an Airplane in a Spin. TN 421, May 1932.
- Bamber, M. J. and Zimmerman, C. H.: The Aerodynamic Forces and Moments Exerted on a Spinning Model of the "NY-1" Airplane as Measured by the Spinning Balance. Rept. 456, 1933.
- Weick, Fred E. and Scudder, Nathan F.: The Effect of Lift, Drag, and Spinning Characteristics of Sharp Leading Edges on Airplane Wings. TN 447, Feb. 1933.
- Scudder, Nathan F.: A Study of Factors Affecting the Steady Spin of an Airplane. TN 468, Aug. 1933.
- Bamber, M. J. and Zimmerman, C. H.: Effect of Stabilizer Location Upon Pitching and Yawing Moments in Spins as Shown by Tests with the Spinning Balance. TN 474, Nov. 1933.
- Scudder, N. F.: A Flight Investigation of the Effect of Mass Distribution and Control Setting on the Spinning of the XN2Y-1 Airplane. Rept. 484, 1934.
- Poggi, L.: Analysis of Spinning in a Monoplane Wing by the Induction Method as Compared with the Strip Method. TM 747, June 1934.

- Bamber, M. J.: Aerodynamic Effects of a Split Flap on the Spinning Characteristics of a Monoplane Model. TN 515, Dec. 1934.
- Bamber, M. J. and Zimmerman, C. H.: Spinning Characteristics of Wings. I - Rectangular Clark Y Monoplane Wing. Rept. 519, 1935.
- Scudder, N. F. and Seidman, Oscar: A
 Flight Investigation of the Spinning of
 the F4B-2 Biplane with Various Loads
 and Tail Surfaces. Rept. 529, 1935.
- Bamber, M. J. and Zimmerman, C. H.: The Aerodynamic Forces and Moments on a Spinning Model of the F4B-2 Airplane as Measured by the Spinning Balance. TN 517, Feb. 1935.
- Bamber, M. J.: Spinning Characteristics of Wings. II - Rectangular Clark Y Biplane Cellule: 25 Percent Stagger; 0° Decalage; Gap/Chord 1.0. TN 526, April 1935.
- Zimmerman, C. H.: Preliminary Tests in the NACA Free-Spinning Wind Tunnel. Rept. 557, 1936.
- Scudder, N. F.: The Forces and Moments Acting on Parts of the XN2Y-1 Airplane During Spins. Rept. 559, 1936.
- McAvoy, W. H.: Piloting Technique for Recovery from Spins. TN 555, Feb. 1936.
- Zimmerman, C. H.: Effect of Changes in Tail Arrangements upon the Spinning of a Low-Wing Monoplane Model. TN 570, June 1936.
- Bamber, M. J. and House, R. O.: Spinning Characteristics of the XN2Y-1 Airplane Obtained from the Spinning Balance and Compared with Results from the Spinning Tunnel and from Flight Tests. Rept. 607, 1937.
- Seidman, Oscar and Neihouse, A. I.:
 Free-Spinning Wind-Tunnel Tests of a
 Low-Wing Monoplane with Systematic
 Changes in Wings and Tails. I Basic
 Loading Condition. TN 608, Aug. 1937.
- Bamber, M. J. and House, R. O.: Spinning Characteristics of Wings. III - A Rectangular and a Tapered Clark Y Monoplane Wing with Rounded Tips. TN 612, Sept. 1937.
- Bamber, M. J. and House, R. O.: Spinning Characteristics of Wings. IV - Changes in Stagger of Rectangular Clark Y Biplane Cellules. TN 625, Dec. 1937.

Spinning (Cont.)

- Seidman, Oscar and Neihouse, A. I.:
 Free-Spinning Wind-Tunnel Tests of a
 Low-Wing Monoplane with Systematic
 Changes in Wings and Tails. II Mass
 Distributed Along the Fuselage. TN
 630, Dec. 1937.
- Bamber, M. J. and House, R. O.: Spinning Characteristics of Wings. V - NACA 0009, 23018, and 6718 Monoplane Wings. TN 633, Jan. 1938.
- Seidman, Oscar and Neihouse, A.I.: Free-Spinning Wind-Tunnel Tests of a Low-Wing Monoplane with Systematic Changes in Wings and Tails. III -Mass Distributed Along the Wings. TN 664, Sept. 1938.
- Seidman, Oscar and Neihouse, A.I.: Free-Spinning Wind-Tunnel Tests of a Low-Wing Monoplane with Systematic Changes in Wings and Tails. IV - Effect of Center-of-Gravity Location. Rept. 672, 1939.
- Seidman, Oscar and Donlan, Charles J.: An Approximate Spin Design Criterion for Monoplanes. TN 711, June 1939.
- Bader, W.: Measurements on a Low-Wing Model in the Rotating Jet and Comparison with Flight Measurements. TM 910, Sept. 1939.
- Seidman, Oscar and Neihouse, A. I.: Free-Spinning Wind-Tunnel Tests of a Low-Wing Monoplane with Systematic Changes in Wings and Tails. V - Effect of Airplane Relative Density. Rept. 691, 1940.
- Seidman, Oscar and McAvoy, William H.: Spin Tests of a Low-Wing Monoplane in Flight and in the Free-Spinning Wind Tunnel. TN 769, July 1940.
- Neihouse, A. I.: The Aileron as an Aid to Recovery from the Spin. TN 776, Sept. 1940.
- Donlan, Charles J.: Spin Tests of Two Models of a Low-Wing Monoplane to Investigate Scale Effect in the Model Test Range. TN 807, May 1941.
- Sears, Richard I. and Hoggard, H. Page, Jr.: Characteristics of Plain and Balanced Elevators on a Typical Pursuit Fuselage at Attitudes Simulating Normal-Flight and Spin Conditions. ARR (WR L-379), March 1942.
- Soulé, Hartley A.: Angular Velocities in Spins as Indicated by Model Tests in the NACA Free-Spinning Wind Tunnels. CB, March 1942.

- Soulé, H. A. and Seidman, Oscar: Influence of Loading Condition on Piloting Technique for Spin Recovery for Pursuit Airplanes. RB (WR L-461), June 1942.
- Seidman, Oscar and Kamm, Robert W.: Multiengine Airplane Spin Characteristics as Indicated by Model Tests in the Free-Spinning Wind Tunnel. ARR (WR L-721), July 1942.
- Neihouse, A. I.: A Mass-Distribution Criterion for Predicting the Effect of Control Manipulation on the Recovery from a Spin. ARR (WR L-168), Aug. 1942.
- Kamm, Robert W.: The Effect of Spanwise Mass Distribution upon the Spin Characteristics of Airplanes as Determined by Model Tests Conducted in the Free-Spinning Wind Tunnel. ARR (WR L-351), Aug. 1942.
- Seidman, Oscar and Klinar, J. W.: Elevator Stick Forces in Spins as Computed from Wind-Tunnel Measurements.

 ARR (WR L-422), Oct. 1942.
- Gillis, Clarence L.: Characteristics of Beveled-Trailing-Edge Elevators on a Typical Pursuit Fuselage at Attitudes Simulating Normal Flight and Spin Conditions. ARR (WR L-391), Dec. 1942.
- Seidman, Oscar and Kamm, Robert W.: Antispin-Tail-Parachute Installations. RB, Feb. 1943.
- Neihouse, Anshal I. and Pitkin, Marvin: Effect of Wing Leading-Edge Slots on the Spin and Recovery Characteristics of Airplanes. ARR 3D29 (WR L-504), April 1943.
- Pepoon, Philip W.: Free-Spinning-Tunnel Tests of a Model of a Canard Airplane. ARR 3E20 (WR L-222), May 1943.
- MacDougall, George F., Jr.: Tests of Inverted Spins in the NACA Free-Spinning Tunnels. ARR 3L02 (WR L-370), Dec. 1943.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Brewer, Gerald W.: Tests of the Northrop MX-334 Glider Airplane in the NACA Full-Scale Tunnel. MR (WR L-628), Jan. 1944.
- Kamm, Robert W. and Pepoon, Philip W.: Spin-Tunnel Tests of a 1/57.33-Scale Model of the Northrop XB-35 Airplane. MR (WR L-739), April 1944.

Spinning (Cont.)

- Seidman, Oscar: Spinning of Large Airplanes. RB L4107 (WR L-96), Oct. 1944.
- Johnson, Harold I.: Resume of NACA Stability and Control Tests of the Bell P-63 Series Airplane. MR L4J19 (WR L-601), Oct. 1944.
- Kamm, Robert W.: Spin-Tunnel Tests of Airplane Models with Extreme Variations in Mass Distribution Along the Three Body Axes. ARR L5C09 (WR L-22), March 1945.
- MacDougall, George F., Jr. and Schneiter, Leslie E.: Spin Tests of a 0.059-Scale Model of the Curtiss-Wright XP-55 Airplane. MR L5G31a (WR L-650), Aug. 1945.
- Stone, Ralph W., Jr. and Daughtridge, Lee T., Jr.: Free-Spinning, Longitudinal-Trim, and Tumbling Tests of 1/17.8-Scale Models of the Cornelius XFG-1 Glider. MR L5K21 (WR L-738), Jan. 1946.
- Kamm, Robert W. and Malvestuto, Frank S., Jr.: Comparison of Tail and Wing-Tip Spin-Recovery Parachutes as Determined by Tests in the Langley 20-Foot Free-Spinning Tunnel. ARR L5G19a (WR L-38), March 1946.
- Wood, John H.: Determination of Towline Tension and Stability of Spin-Recovery Parachutes. ARR L6A15 (WR L-267), March 1946.
- Neihouse, Anshal I.; Lichtenstein, Jacob H. and Pepoon, Philip W.: Tail-Design Requirements for Satisfactory Spin Recovery. TN 1045, April 1946.
- Scher, Stanley H.: Effect of 40° Sweepback on the Spin and Recovery Characteristics of a 1/25-Scale Model of a Typical Fighter-Type Airplane as Determined by Free-Spinning-Tunnel Tests. TN 1256, April 1947.
- Neihouse, A.I.: Tail-Design Requirements for Satisfactory Spin Recovery for Personal-Owner-Type Light Airplanes. TN 1329, June 1947.
- Stone, Ralph W., Jr. and Burk, Sanger M., Jr.: Effect of Horizontal-Tail Position on the Hinge Moments of an Unbalanced Rudder in Attitudes Simulating Spin Conditions. TN 1337, June 1947.
- Stone, Ralph W., Jr. and Burk, Sanger M., Jr.: Hinge-Moment Characteristics of Balanced Elevator and Rudder for a Specific Tail Configuration on a Fuse-lage in Spinning Attitudes. TN 1400, Aug. 1947.

- Stone, Ralph W., Jr. and Klinar, Walter J.: The Influence of Very Heavy Fuselage Mass Loadings and Long Nose Lengths upon Oscillations in the Spin. TN 1510, Jan. 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Neihouse, Anshal I.: The Effect of Variations in Moments of Inertia on Spin and Recovery Characteristics of a Single-Engine Low-Wing Monoplane with Various Tail Arrangements, Including a Twin Tail. TN 1575, May 1948.
- Gracey, William: The Experimental Determination of the Moments of Inertia of Airplanes by a Simplified Compound-Pendulum Method. TN 1629, June 1948.
- Gale, Lawrence J.: Effect of Landing Flaps and Landing Gear on the Spin and Recovery Characteristics of Airplanes. TN 1643, June 1948.
- Klinar, Walter J. and Snyder, Thomas L.: Influence of Tail Length upon the Spin-Recovery Characteristics of a Trainer-Type-Airplane Model. TN 1764, Dec. 1948.
- Gale, Lawrence J. and Jones, Ira P., Jr.:
 Effects of Antispin Fillets and Dorsal
 Fins on the Spin and Recovery Characteristics of Airplanes as Determined
 from Free-Spinning-Tunnel Tests. TN
 1779, Dec. 1948.
 - Klinar, Walter J. and Gale, Lawrence J.:
 Wind-Tunnel Investigation of the Spinning Characteristics of a Model of a
 Twin-Tail Low-Wing Personal-OwnerType Airplane with Linked and Unlinked Rudder and Aileron Controls.
 TN 1801, Jan. 1949.
 - Scher, Stanley H. and Gale, Lawrence J.: Wind-Tunnel Investigation of the Opening Characteristics, Drag, and Stability of Several Hemispherical Parachutes. TN 1869, April 1949.
 - Neihouse, Anshal I.: Spin-Tunnel Investigation to Determine the Effectiveness of a Rocket for Spin Recovery. TN 1866, April 1949.
 - Höhler, P.: The Influence of the Application of Power During Spin Recovery of Multiengine Airplanes. TM 1219, June 1949.
- Höhler, P. and Köppen, I. v.: Experimental Flights For Testing of a Reactor as an Expedient for the Termination of Dangerous Spins. TM 1221, July 1949.

STALLING

(1.8.4)

- Hopf, L.: The Danger of Stalled Flight and an Analysis of the Factors Which Govern It. TM 52, Nov. 1921.
- Ackeret, J.; Betz, A. and Schrenk, O.: Experiments with an Airfoil from Which the Boundary Layer Is Removed by Suction. TM 374, Aug. 1926.
- Mazer, Paul: Devices for Prevention of Stalled Flight. TM 389, Nov. 1926.
- Lachmann, G.: Stall-Proof Airplanes. TM 393, Jan. 1927.
- Knight, Montgomery and Loeser, Oscar, Jr.: Pressure Distribution over a Rectangular Monoplane Wing Model up to 90° Angle of Attack. Rept. 288, 1928.
- Knight, Montgomery and Bamber, Millard J.: Preliminary Report on the Flat-Top Lift Curve as a Factor in Control at Low Speed. TN 297, Sept. 1928.
- Jones, B. Melvill: Research on the Control of Airplanes. TM 485, Oct. 1928.
- Loeser, Oscar E., Jr.: Pressure Distribution Tests on PW-9 Wing Models from -18° Through 90° Angle of Attack. Rept. 296, 1929.
- Fuchs, Richard and Schmidt, Wilhelm: Air Forces and Air-Force Moments at Large Angles of Attack and How They Are Affected by the Shape of the Wing. TM 573, July 1930.
- Gruschwitz, E.: The Process of Separation in the Turbulent Friction Layer. TM 699, Feb. 1933.
- Weick, Fred E.; Soule, Hartley A. and Gough, Melvin N.: A Flight Investigation of the Lateral Control Characteristics of Short Wide Ailerons and Various Spoilers with Different Amounts of Wing Dihedral. Rept. 494, 1934.
- Jacobs, Eastman N.: Tapered Wings, Tip Stalling, and Preliminary Results from Tests of the Stall-Control Flap. ACR (WR L-296), Nov. 1937.
- Silverstein, Abe; Katzoff, S. and Hootman, James A.: Comparative Flight and Full-Scale Wind-Tunnel Measurements of the Maximum Lift of an Airplane. Rept. 618, 1938.

- Anderson, Raymond F.: The Experimental and Calculated Characteristics of 22 Tapered Wings. Rept. 627, 1938.
- Soulé, Hartley A. and Gough, Melvin N.: Some Aspects of the Stalling of Modern Low-Wing Monoplanes. TN 645, April 1938.
- Anderson, Raymond F.: A Comparison of Several Tapered Wings Designed to Avoid Tip Stalling. TN 713, June 1939.
- Bailey, F. J., Jr. and Gustafson, F. B.: Observations in Flight of the Region of Stalled Flow over the Blades of an Autogiro Rotor. TN 741, Dec. 1939.
- Rodert, Lewis A. and Jones, Alun R.:
 Profile-Drag Investigation of an Airplane Wing Equipped with Rubber Inflatable De-Icer. ACR, Dec. 1939.
- Soulé, H. A.: Preliminary Investigation of the Flying Qualities of Airplanes. Rept. 700, 1940.
- Ames, Milton B., Jr. and Sears, Richard I.: Pressure-Distribution Investigation of an NACA 0009 Airfoil with a 30-Percent-Chord Plain Flap and Three Tabs. TN 759, May 1940.
- Muse, Thomas C. and Neely, Robert H.:
 Wind-Tunnel Investigation of an NACA
 66,2-216 Low-Drag Wing with Split
 Flaps of Various Sizes. ACR, Sept.
 1941.
- Nissen, J. M. and White, M. D.: Flight Investigation of Wing-Gun Fairings on a Fighter Type Airplane. ACR (WR L-247), Oct. 1941.
- Vensel, Joseph R.: Flight Measurements of the Elevator Deflections Used in Landings of Several Airplanes. ARR (WR L-248), Nov. 1941.
- Mutterperl, William: The Calculation of Span Load Distributions on Swept-Back Wings. TN 834, Dec. 1941.
- Jones, Robert T.: Notes on the Stability and Control of Tailless Airplanes. TN 837, Dec. 1941.
- Nissen, J. M. and Phillips, W. H.: Measurements of the Flying Qualities of a Hawker Hurricane Airplane. MR (WR L-565), April 1942.
- Vensel, J. R. and Phillips, W. H.: Stalling Characteristics of the Supermarine Spitfire VA Airplane. ACR (WR L-353), Sept. 1942.

- Stalling (Cont.)
- Johnson, Harold I. and Vensel, Joseph R.: Flight Measurements of the Rudder Control and Sideslip Characteristics of Four Vertical Tail Arrangements on the P-40 Series Airplanes. MR (WR L-547), Oct. 1942.
- Graham, Robert R. and Ashworth, C. Dixon: Tests in the 19-Foot Pressure Tunnel of a 1/2.75-Scale Model of the F4U-1 Airplane with Several Balanced Elevators Full-Span Flaps, and Dropable Gas Tank. ACR, Oct. 1942.
- Biebel, William J.: Full-Scale Tunnel Tests of a Flying Model of the Curtiss XP-55 Airplane. MR (WR L-627), Jan. 1943.
- Harmon, Sidney M.: Additional Design Charts Relating to the Stalling of Tapered Wings. ARR (WR L-271), Jan. 1943.
- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.: Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3I30 (WR W-6), Sept. 1943.
- Neely, Robert H.: Wind-Tunnel Tests of an NACA 44R-Series Tapered Wing with a Straight Trailing Edge and a Constant-Chord Center Section. RB 3L13, Dec. 1943.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Teplitz, Jerome: Effects of Small Angles of Sweep and Moderate Amounts of Dihedral on Stalling and Lateral Characteristics of a Wing-Fuselage Combination Equipped with Partial and Full-Span Double-Slotted Flaps. Rept. 800, 1944.
- Phillips, W. H.; Williams, W. C. and Hoover, H. H.: Measurements of Flying Qualities of a Curtiss SB2C-1 Airplane (No. 00014). MR (WR L-571), March 1944.
- Nissen, James M. and Gadeberg, Burnett
 L.: Effect of Mach and Reynolds
 Number on the Power-Off Maximum
 Lift Coefficient Obtainable on a P-39N-1
 Airplane as Determined in Flight.
 ACR 4F28, June 1944.
- Weil, Joseph and Wells, Evalyn G.: Wind-Tunnel Tests of the 1/8-Scale Powered Model of the Curtiss XBTC-2 Airplane. I - Preliminary Investigation of Longitudinal Stability. MR (WR L-667), June 1944.

- Johnson, Harold I.: Resume of NACA Stability and Control Tests of the Bell P-63 Series Airplane. MR L4J19 (WR L-601), Oct. 1944.
- Sweberg, Harold H. and Dingeldein, Richard C.: Summary of Measurements in Langley Full-Scale Tunnel of Maximum Lift Coefficients and Stalling Characteristics of Airplanes. Rept. 829, 1945.
- Sjoberg, S. A.; Crane, H. L. and Hoover, H. H.: Measurement of Flying Qualities of a Douglas A-26B Airplane. (AAF No. 41-39120). III - Stalling Characteristics. MR L5A04a (WR L-607), Jan. 1945.
- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer No. 04776). III - Stalling Characteristics. MR L5B13b (WR L-717), Feb. 1945.
- Alexander, S. R. and Sivells, James C.:
 Tests of a 1/14-Scale Powered Model
 of the XB-36 Airplane in the Langley
 19-Foot Pressure Tunnel. I Stalling
 Characteristics and Aileron Effectiveness of Several Wing and Flap Arrangements. MR L5B23 (WR L-624), Feb.
 1945.
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.
- Weil, Joseph and Boykin, Rebecca I.:
 Wind-Tunnel Tests of the 0.15-Scale
 Powered Model of the Fleetwings
 XBTK-1 Airplane. I Longitudinal
 Stability and Control. TED No. NACA
 2332. MR L5D27a (WR L-785), May
 1945.
- Spreiter, John R.; Galster, George M. and Blair, William K.: Effect of Mach and Reynolds Numbers on the Maximum Lift Coefficient Obtainable in Gradual and Abrupt Stalls of a Pursuit Airplane Equipped with Low-Drag Wing. MR A5G06 (WR A-5), July 1945.
- MacDougall, George F., Jr. and Schneiter, Leslie E.: Longitudinal-Trim Tests of a 0.059-Scale Model of the Curtiss-Wright XP-55 Airplane. MR L5G31 (WR L-538), August 1945.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Effect of Wing Modifications on the Longitudinal Stability of a Tailless All-Wing Airplane Model. ACR L5G23 (WR L-42), Sept. 1945.

- Stalling (Cont.)
- Gustafson, F. B. and Myers, G. C., Jr.: Stalling of Helicopter Blades. Rept. 840, 1946.
- Spreiter, John R. and Steffen, Paul J.: The Effect of Mach and Reynolds Numbers on Maximum Lift Coefficient. TN 1044, March 1946.
- Brewer, G. W. and Rickey, E. A.: Tests of a 1/7-Scale Powered Model of the Kaiser Tailless Airplane in the Langley Full-Scale Tunnel TED No. NACA 2340. MR L6C13 (WR L-531), March 1946.
- Serebrisky, Y. M. and Biachuev, S. A.: Wind-Tunnel Investigation of the Horizontal Motion of a Wing Near the Ground. TM 1095, Sept. 1946.
- Hunter, P. A. and Vensel, J. R.: A Flight Investigation to Increase the Safety of a Light Airplane. TN 1203, March 1947.
- Gustafson, F. B. and Gessow, Alfred: Effect of Blade Stalling on the Efficiency of a Helicopter Rotor as Measured in Flight. TN 1250, April 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 42° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1287, May 1947.
- Maggin, Bernard and Bennett, Charles V.: Flight Tests of an Airplane Model with a 62° Swept-Back Wing in the Langley Free-Flight Tunnel. TN 1288, May 1947.
- Thiel, G. and Weissinger, F.: Six-Component Measurements on a Straight and a 35° Swept-Back Trapezoidal Wing with and Without Split Flap. TM 1107, June 1947.
- Hieser, Gerald: Tuft Studies of the Flow over a Wing at Four Angles of Sweep. RM L7C05a, July 1947.
- Letko, William and Feigenbaum, David: Wind-Tunnel Investigation of Split Trailing-Edge Lift and Trim Flaps on a Tapered Wing with 23° Sweepback. TN 1352, July 1947.
- Deters, Owen J. and Russell, Robert T.: Investigation of the Aileron and Tab of a Spring-Tab Lateral Control System in the Langley 19-Foot Pressure Tunnel. TN 1431, Sept. 1947.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.

- Sivells, James C. and Spooner, Stanley H.: Investigation in the Langley 19-Foot Pressure Tunnel of Two Wings of NACA 65-210 and 64-210 Airfoil Sections with Various Type Flaps. TN 1579, May 1948.
- Davis, Don D., Jr. and Sweberg, Harold H.: Investigation of Some Factors Affecting Comparisons of Wind-Tunnel and Flight Measurements of Maximum Lift Coefficients for a Fighter-Type Airplane. TN 1639, June 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Longitudinal Stability, Stalling, and Lift Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 40-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1679, Aug. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of Its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Wall, Nancy E.: Chordwise Pressure Distributions on a 12-Foot-Span Wing of NACA 66-Series Airfoil Sections up to a Mach Number of 0.60. TN 1696, Oct. 1948.
- Cooper, Morton and Korycinski, Peter F.:
 The Effects of Compressibility on the
 Lift, Pressure, and Load Characteristics of a Tapered Wing of NACA
 66-Series Airfoil Sections. TN 1697,
 Oct. 1948.
- Stokke, Allen R. and Aiken, William S., Jr.: Flight Measurements of Buffeting Tail Loads. TN 1719, Oct. 1948.
- Harper, Paul W. and Flanigan, Roy E.: Investigation of the Variation of Maximum Lift for a Pitching Airplane Model and Comparison with Flight Results. TN 1734, Oct. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight Measurements of the Stability, Control, and Stalling Characteristics of an Airplane Having a 35° Sweptback Wing Without Slots and with 80-Percent-Span Slots and a Comparison with Wind-Tunnel Data. TN 1743, Nov. 1948.
- West, F. E., Jr. and Hallissy, J. M., Jr.: Effects of Compressibility on Normal-Force, Pressure, and Load Characteristics of a Tapered Wing of NACA 66-Series Airfoil Sections with Split Flaps. TN 1759, Dec. 1948.

- Stalling (Cont.)
- McCormack, Gerald M. and Cook, Woodrow L.: A Study of Stall Phenomena on a 45° Swept-Forward Wing. TN 1797, Jan. 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I - Laminar Flows. TM 1217, April 1949.
- West, F. E., Jr. and Himka, T.: Effects of Compressibility on Lift and Load Characteristics of a Tapered Wing of NACA 64-210 Airfoil Sections up to a Mach Number of 0.60. TN 1877, May 1949.
- Anderson, Seth B.: Correlation of Pilot Opinion of Stall Warning with Flight Measurements of Various Factors Which Produce the Warning. TN 1868, April 1949.
- Gault, Donald E.: Boundary-Layer and Stalling Characteristics of the NACA 63-009 Airfoil Section. TN 1894, June 1949.
- McCullough, George B. and Gault, Donald E.: Boundary-Layer and Stalling Characteristics of the NACA 64A006 Airfoil Section. TN 1923, Aug. 1949.

FLYING QUALITIES

(1.8.5)

- Norton, F. H. and Allen, E. T.: Control in Circling Flight. Rept. 112, 1921.
- Norton, F. H.: Practical Stability and Controllability of Airplanes. Rept. 120, 1921.
- British Certificates of Airworthiness. TM 23, May 1921.
- Hopf, L.: The Danger of Stalled Flight and an Analysis of the Factors Which Govern It. TM 52, Nov. 1921.
- Norton, F. H. and Brown, W. G.: Controllability and Maneuverability of Airplanes. Rept. 153, 1922.
- Reid, H. J. E.: A Study of Airplane Maneuvers with Special Reference to Angular Velocities. Rept. 155, 1922.
- Warner, Edward P.: The Controls of an Airplane. TM 215, June 1923.
- Suggestions for Commercial Airplane Construction. From "Illustrierte Flug-Woche," January 4, 1922.
- Anon.: Rules and Regulations for Endurance Contest of Aviation Engines. (Under the Auspices of the Aero Club of France.) TM 240, Nov. 1923.

- Zahm, A. F.; Smith, R. H. and Louden, F. A.: Air Forces, Moments and Damping on Model of Fleet Airship Shenandoah. Rept. 215, 1925.
- Carroll, Thomas: A Comparison of the Take-Off and Landing Characteristics of a Number of Service Airplanes. Rept. 249, 1927.
- Carroll, Thomas and McAvoy, William H. Spiral Tendency in Blind Flying. TN 314, Aug. 1929.
- Hübner, W.: Information Obtained from Airplane Flight Tests in the Year 1927-1928. TM 535, Oct. 1929.
- Hübner, Walter: Relation Between the Stability Characteristics and the Controllability of German Airplanes. TM 551, Feb. 1930.
- Hertel, Heinrich: Determination of the Maximum Control Forces and Attainable Quickness in the Operation of Airplane Controls. TM 583, Sept. 1930.
- Weick, Fred E.: Preliminary Investigation of Modifications to Conventional Airplanes To Give Nonstalling and Short-Landing Characteristics. Rept. 418, 1932.
- Anderlik, E.: Airplane Stability in Taxiing. TM 682, Sept. 1932.
- Pris, M.: The Controls at Low Hinge Moments. TM 685, Sept. 1932.
- Hübner, Walter: Results of Extended Tests of the Focke-Wulf F 19a "Ente," a Tail-First Airplane. TM 721, Sept. 1933.
- Von Köppen, Joachim: Trend of Airplane Flight Characteristics. TM 731, Dec. 1933.
- Hübner, Walter: Additional Test Data on Static Longitudinal Stability. TM 752, Aug. 1934.
- Weick, Fred E. and Thompson, Floyd L.: Preliminary Wind-Tunnel and Flight Tests of a Balanced Split Flap. ACR, Aug. 1934.
- Soulé, H. A.: Flight Tests of a Balanced Split Flap with Particular Reference to Rapid Operation. TN 548, Dec. 1935.
- Scudder, N. F.: The Forces and Moments Acting on Parts of the XN2Y-1 Airplane During Spins. Rept. 559, 1936.
- Jones, Robert T.: A Simplified Application of the Method of Operators to the Calculation of Disturbed Motions of an Airplane. Rept. 560, 1936.

- Flying Qualities (Cont.)
- Weick, Fred E. and Jones, Robert T.: The Effect of Lateral Controls in Producing Motion of an Airplane as Computed from Wind-Tunnel Data. Rept. 570, 1936.
- Soulé, Hartley A.: Flight Measurements of the Dynamic Longitudinal Stability of Several Airplanes and a Correlation of the Measurements with Pilots' Observations of Handling Characteristics. Rept. 578, 1936.
- Jones, Robert T.: A Study of the Two-Control Operation of an Airplane. Rept. 579, 1936.
- Zimmerman, Charles H.: An Analysis of Lateral Stability in Power-Off Flight with Charts for Use in Design. Rept. 589, 1937.
- Shortal, Joseph A.: Wind-Tunnel and Flight Tests of Slot-Lip Ailerons. Rept. 602, 1937.
- Weick, Fred E. and Jones, Robert T.: Résumé and Analysis of NACA Lateral Control Research. Rept. 605, 1937.
- Dearborn, C. H. and Soulé, H. A.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild 22 Airplane Equipped with a Zap Flap and Zap Ailerons. TN 596, March 1937.
- Klemin, Alexander: Motion of the Two-Control Airplane in Rectilinear Flight After Initial Disturbances with Introduction of Controls Following an Exponential Law. TN 615, Sept. 1937.
- Jones, Robert T.: The Influence of Lateral Stability on Disturbed Motions of an Airplane with Special Reference to the Motions Produced by Gusts. Rept. 638, 1938.
- Soulé, H. A. and Hootman, James A.: A Flight Investigation of the Reduction of Aileron Operating Force by Means of Fixed Tabs and Differential Linkage, with Notes on Linkage Design. TN 653, June 1938.
- Haus, Fr.: Theoretical Study of Various Airplane Motions After Initial Disturbance. TM 867, June 1938.
- Wetmore, J. W.: Flight Tests of Retractable Ailerons on a Highly Tapered Wing. TN 714, June 1939.
- Soulé, H. A.: Preliminary Investigation of the Flying Qualities of Airplanes. Rept. 700, 1940.

- Gilruth, R. R. and Turner, W. N.: Lateral Control Required for Satisfactory Flying Qualities Based on Flight Tests of Numerous Airplanes. Rept. 715, 1941.
- Baker, Paul S.: The Development of a New Lateral-Control Arrangement. ARR, Oct. 1941.
- Fehlner, Leo F.: A Study of the Effects of Vertical Tail Area and Dihedral on the Lateral Maneuverability of an Airplane. ARR (WR L-347), Oct. 1941.
- Pearson, H. A. and Garvin, J. B.: Velocity Gained and Altitude Lost in Recoveries from Inclined Flight Paths. TN 829, Oct. 1941.
- Vensel, Joseph R.: Flight Measurements of the Elevator Deflections Used in Landings of Several Airplanes. ARR (WR L-248), Nov. 1941.
- Williams, W. C. and Kleckner, H. F.: A Flight Investigation of Internally Balanced Sealed Ailerons. ARR (WR L-480), Dec. 1941.
- Bailey, F. J., Jr. and O'Sullivan, William J.: A Theoretical Analysis of the Effect of Aileron Inertia and Hinge Moment on the Maximum Rolling Acceleration of Airplanes in Abrupt Aileron Rolls. ARR (WR L-302), Feb. 1942.
- Clousing, L. A.; Lehr, Robert R. and O'Sullivan, William J.: Full-Scale Wind-Tunnel and Flight Tests of a Fairchild XR2K-1 Airplane with a Zap Flap and Upper-Surface Aileron-Wing Installation. ARR (WR L-437), March 1942.
- Nissen, J. M. and Phillips, W. H.: Measurements of the Flying Qualities of a Hawker Hurricane Airplane. MR (WR L-565), April 1942.
- Phillips, William H.: Effect of Spring and Gravity Moments in the Control System on the Longitudinal Stability of the Brewster XSBA-1 Airplane. ARR (WR L-263), April 1942.
- Williams, W. C.: A Flight Investigation of Internally Balanced Sealed Ailerons in the Presence of a Balanced Split Flap. ARR (WR L-242), May 1942.
- Root, L. E.: The Development of Satisfactory Flying Qualities on the Douglas Dive Bomber, Model SBD-1 Through Flight Testing Successive Modifications in Control-Surface Area, Hinge-Line Location, and Aerodynamic-Balance Nose Shape. ACR (WR W-81), May 1942.

- Flying Qualities (Cont.)
- White, M. D. and Hoover, Herbert H.:
 Flight Tests of Modifications To Improve the Aileron Control Characteristics of a North American XP-51
 Airplane. (AC No. 41-38). MR (WR L-636), June 1942.
- Recant, Isidore G. and Swanson, Robert S.:
 Determination of the Stability and Control Characteristics of Airplanes from Tests of Powered Models. ARR, July 1942.
- Goranson, R. Fabian: Calculated Effects of Full-Span Slotted and Fowler Flaps on Longitudinal Stability and Control Characteristics for a Typical Fighter-Type Airplane with Various Tail Modifications. ARR (WR L-392), July 1942.
- Rogallo, F. M. and Lowry, John G.: Wind-Tunnel Investigation of a Plain Aileron and a Balanced Aileron on a Tapered Wing with Full-Span Duplex Flaps. ARR (WR L-481), July 1942.
- Gilruth, R. R.: Flight Tests of Internally Balanced, Sealed Ailerons on the Curtiss XP-60 Airplanes. CB, July 1942.
- Phillips, William H.: Comparison of Aileron Control Characteristics as Determined in Flight Tests of P-36, P-40, Spitfire, and Hurricane Pursuit Airplanes. CB, Aug. 1942.
- Kleckner, Harold F.: Flight Measurements of the Aileron Characteristics of a Grumman F4F-3 Airplane. ACR, Sept. 1942.
- Phillips, William H. and Vensel, Joseph R.: Measurements of the Flying Qualities of a Supermarine Spitfire VA Airplane. ACR (WR L-334), Sept. 1942.
- Clousing, Lawrence A. and McAvoy,
 William H.: Flight Measurements of
 the Lateral Control Characteristics of
 an Airplane Equipped with a Combination Aileron-Spoiler Control System.
 MR (WR A-68), Sept. 1942.
- Recant, I. G. and Wallace, A. R.: Effect of Ground on Characteristics of a Model of a Low-Wing Airplane with Full-Span Slotted Flap with and Without Power. ARR (WR L-335), Sept. 1942.
- Fehlner, Leo F.: A Study of the Effect of Adverse Yawing Moment on Lateral Maneuverability at a High Lift Coefficient. ARR (WR L-465), Sept. 1942.

- Hoover, Herbert H. and White, Maurice D.: Lateral-Control Characteristics of North American XP-51 Airplane (AC No. 41-38) with Beveled Trailing-Edge Ailerons in High-Speed Flight. MR (WR L-597), Nov. 1942.
- Soulé, H. A. and Harmon, S. M.: A Study of the Effect of Increased Size and Speed of Pursuit Airplanes on the Aileron Balancing Problem. RB, Nov. 1942.
- Donlan, Charles J.: Some Theoretical Considerations of Longitudinal Stability in Power-On Flight with Special Reference to Wind-Tunnel Testing. ARR (WR L-309), Nov. 1942.
- Gilruth, R. R.: Requirements for Satisfactory Flying Qualities of Airplanes. Rept. 755, 1943.
- Campbell, John P. and Seacord, Charles L., Jr.: The Effect of Mass Distribution on the Lateral Stability and Control Characteristics of an Airplane as Determined by Tests of a Model in the Free-Flight Tunnel. Rept. 769, 1943.
- Turner, William N. and Adams, Betty:
 Flight Tests of the Stability, Maximum
 Lift, and High Speed of a Navy OS2U-2
 Airplane (No. 2189) Equipped with a
 Maxwell Slot. MR (WR A-88), Jan.
 1943.
- Jones, Robert T. and Kleckner, Harold F.: Theory and Preliminary Flight Tests of an All-Movable Vertical Tail Surface. ARR (WR L-496), Jan. 1943.
- Campbell, John P. and Hollingworth,
 Thomas A.: The Effect on Stability
 and Control of a Pusher Propeller
 Behind Conventional Tail Surfaces as
 Determined by Tests of a Powered
 Model in the Free-Flight Tunnel.
 ACR (WR L-220), Jan. 1943.
- White, Maurice D.; Hoover, Herbert H. and Garris, Howard W.: Flying Qualities and Stalling Characteristics of North American XP-51 Airplane (AAF No. 41-38). MR (WR L-566), April 1943.
- Shortal, Joseph A. and Draper, John W.:
 Free-Flight-Tunnel Investigation of
 the Effect of the Fuselage Length and
 the Aspect Ratio and Size of the Vertical Tail on Lateral Stability and
 Control. ARR 3D17 (WR L-487),
 April 1943.
- Fehlner, Leo F.: A Study of the Effects of Radii of Gyration and Altitude on Aileron Effectiveness at High Speed. RB 3D26 (WR L-249), April 1943.

- Flying Qualities (Cont.)
- Conway, H. M.: Notes on Maximum Airplane Angular Velocities. CB 3E19 (WR W-101), May 1943.
- Kleckner, Harold F.: Flight Tests of an All-Movable Vertical Tail on the Fairchild XR2K-1 Airplane. ACR 3F26 (WR L-397), June 1943.
- Campbell, John P. and Seacord, Charles L., Jr.: Effect of Wing Loading and Altitude on Lateral Stability and Control Characteristics of an Airplane as Determined by Tests of a Model in the Free-Flight Tunnel. ARR 3F25 (WR L-522), June 1943.
- Phillips, W. H. and Nissen, J. M.: Flight Tests of Various Tail Modifications on the Brewster XSBA-1 Airplane. I -Measurements of Flying Qualities with Original Tail Surfaces. ARR 3F07 (WR L-412), June 1943.
- Stevens, Victor I., Jr. and McCullough, George B.: Flying Qualities of the PV-1 as Estimated from Wind-Tunnel Tests. MR (WR A-93), Sept. 1943.
- Johnson, Harold I.; Liddell, C. J. and Hoover, H. H.: Measurements of the Flying Qualities of a Bell P-39D-1 Airplane. (AAF No. 41-28378.) MR (WR L-602), Sept. 1943.
- Schuldenfrei, Marvin: Some Notes on the Determination of the Stick-Fixed Neutral Point from Wind-Tunnel Data. RB 3120 (WR L-344), Sept. 1943.
- Stevens, Victor I., Jr. and McCullough, George B.: Flying Qualities of the PV-1 as Estimated from Wind-Tunnel Tests. MR (WR A-93), Oct. 1943.
- White, Maurice D. and Hoover, Herbert H.: Flight Tests of Beveled-Trailing-Edge Ailerons with Various Modifications on a North American XP-51 Airplane (AAF No. 41-38). MR (WR L-550), Dec. 1943.
- Wetmore, Joseph W. and Sawyer, Richard H.: Flight Tests of F2A-2 Airplane with Full-Span Slotted Flaps and Trailing-Edge and Slot-Lip Ailerons. ARR 3L07 (WR L-272), Dec. 1943.
- Gilruth, R. R. and Liddell, C. J.: Effect of Altitude on Elevator Control Characteristics in Turning Flight as Measured for P-47B and P-47C Airplanes. ACR 3L17, Dec. 1943.
- Phillips, W. H. and Crane, H. L.: Flight
 Tests of Various Tail Modifications on
 the Brewster XSBA-1 Airplane. II Measurements of Flying Qualities with
 Tail Configuration Number Two. MR
 (WR L-598), Dec. 1943.

- Goett, Harry J.; Jackson, Roy P. and Belsley, Steven E.: Wind-Tunnel Procedure for Determination of Critical Stability and Control Characteristics of Airplanes. Rept. 781, 1944.
- NACA-Langley Stability Research Division: An Interim Report on the Stability and Control of Tailless Airplanes. Rept. 796, 1944.
- Jones, Robert T. and Greenberg, Harry: Effect of Hinge-Moment Parameters on Elevator Stick Forces in Rapid Maneuvers. Rept. 798, 1944.
- Harmon, Sidney M.: Determination of the Effect of Wing Flexibility on Lateral Maneuverability and a Comparison of Calculated Rolling Effectiveness with Flight Results. ARR 4A28 (WR L-525), Jan. 1944.
- Hildebrand, Francis B. and Reissner, Eric: The Influence of the Aerodynamic Span Effect on the Magnitude of the Torsional-Divergence Velocity and on the Shape of the Corresponding Deflection Mode. TN 926, Feb. 1944.
- Phillips, W. H.; Williams, W. C. and Hoover, H. H.: Measurements of Flying Qualities of a Curtiss SB2C-1 Airplane (No. 00014). MR (WR L-571), March 1944.
- Murray, Harry E. and Gillis, Clarence L.:
 An Automatically Variable Control
 Linkage and Its Effect on the LateralControl Characteristics of a HighSpeed Fighter Airplane. RB L4E23
 (WR L-65), May 1944.
- Campbell, John P. and Paulson, John W.:
 The Effects of Static Margin and Rotational Damping in Pitch on the Longitudinal Stability Characteristics of an Airplane as Determined by Tests of a Model in the NACA Free-Flight Tunnel.
 ARR L4F02 (WR L-55), June 1944.
- Dods, Jules B., Jr. and Douglass, William M.: Wind-Tunnel Investigation of a 1/20-Scale Powered Model of a Four-Engine Transport Airplane. MR (WR A-94), July 1944.
- Crane, H. L. and Reeder, J. P.: Flight Tests of Various Tail Modifications on the Brewster XSBA-1 Airplane. III - Measurements of Flying Qualities with Tail Configuration 3. MR (WR L-599), July 1944.
- White, Maurice D.: Effect of Power on the Stick-Fixed Neutral Points of Several Single-Engine Monoplanes as Determined in Flight. CB L4H01 (WR L-24), Aug. 1944.

- Flying Qualities (Cont.)
- Goranson, R. Fabian: A Method for Predicting the Elevator Deflection Required To Land. ARR L4I16 (WR L-95), Sept. 1944.
- Ribner, Herbert S.: Notes on the Propeller and Slipstream in Relation to Stability. ARR L4I12a (WR L-25), Oct. 1944.
- Spreiter, John R. and Nissen, James N.:
 Flight Tests of a Pursuit Airplane
 Fitted with an Experimental BellowsType Bob Weight. MR (WR A-6),
 Oct. 1944.
- Johnson, Harold I.: Resume of NACA Stability and Control Tests of the Bell P-63 Series Airplane. MR L4J19 (WR L-601), Oct. 1944.
- Phillips, W. H.; Crane, H. L. and Hunter, P. A.: Effect of Lateral Shift of Center of Gravity on Rudder Deflection Required for Trim. RB L4106 (WR L-92), Nov. 1944.
- Weiberg, James A. and Schnurbusch, Alfred W.: Flying Qualities of a Bomber Airplane with Engines in the Fuselage as Estimated from Tests of a 1/8-Scale Powered Model. MR A4K04 (WR A-78), Nov. 1944.
- Crane, H. L.; Sjoberg, S. A. and Hoover, H. H.: Measurement of Flying Qualities of a Douglas A-26B Airplane (AAF No. 41-39120). I - Longitudinal Stability and Control Characteristics. MR L4L06 (WR L-605), Dec. 1944.
- Kayten, Gerald G. and Koven, William: Comparison of Wind-Tunnel and Flight Measurements of Stability and Control Characteristics of a Douglas A-26 Airplane. Rept. 816, 1945.
- Kayten, Gerald G.: Analysis of Wind-Tunnel Stability and Control Tests in Terms of Flying Qualities of Full-Scale Airplanes. Rept. 825, 1945.
- Campbell, John P. and Seacord, Charles L., Jr.: Determination of the Stability and Control Characteristics of a Tailless All-Wing Airplane Model with Sweepback in the Langley Free-Flight Tunnel. ACR L5A13 (WR L-50), Feb. 1945.
- Williams, Walter C. and Reeder, John P.: Flight Measurements of the Flying Qualities of an F6F-3 Airplane (BuAer No. 04776). I Longitudinal Stability and Control. MR L5B13 (WR L-715), Feb. 1945.

- Kleckner, Harold F.: Preliminary Flight Research on an All-Movable Horizontal Tail as a Longitudinal Control for Flight at High Mach Numbers. ARR L5C08 (WR L-89), March 1945.
- Sjoberg, S. A.; Crane, H. L. and Hoover, H. H.: Measurement of Flying Qualities of a Douglas A-26B Airplane (AAF No. 41-39120). II - Lateral and Directional Stability and Control Characteristics. MR L5D06 (WR L-608), April 1945.
- Delany, Noel K. and Kauffman, William M.: Correlation of Wind-Tunnel Predictions with Flight Tests of a Twin-Engine Patrol Airplane. I Longitudinal-Stability and -Control Characteristics. MR A5D04 (WR A-86), April 1945.
- White, Maurice D. and Reeder, John P.:
 Flight Investigation of Modifications
 To Improve the Elevator Control-Force
 Characteristics of the Curtiss SB2C1C Airplane in Maneuvers. TED No.
 NACA 2333. MR L5D04a (WR L-719),
 April 1945.
- Crane, Harold L. and Sjoberg, Sigurd A.:
 Comparison of Predicted and Actual
 Control-Fixed Stability and Control
 Characteristics of a Douglas A-26B
 Airplane. MR L5D06 (WR L-608),
 April 1945.
- Williams, Walter C.: Flight Tests of the Lateral Control Characteristics of an F6F-3 Airplane Equipped with Spring-Tab Ailerons. ARR L5C23 (WR L-149), April 1945.
- Crane, H. L.; Talmage, D. B. and Gray, W. E., Jr.: Measurement of Flying Qualities of a DeHavilland Mosquito F-8 Airplane (AAF No. 43-334960). I Lateral and Directional Stability and Control Characteristics. MR L5D19 (WR L-593), May 1945.
- Crane, H. L.; Talmage, D. B. and Gray, W. E., Jr.: Measurement of Flying Qualities of a DeHavilland Mosquito F-8 Airplane (AAF No. 43-334960). II Longitudinal Stability and Control Characteristics. MR L5G11 (WR L-614), July 1945.
- Paulson, John W. and Bennett, Charles V.: Stability and Control Characteristics of a Fighter Airplane in Inverted Flight Attitude as Determined by Model Tests. ARR L5F25a (WR L-15), Aug. 1945.

Flying Qualities (Cont.)

- Delany, Noel K. and Kauffman, William M.: Correlation of Wind-Tunnel Predictions with Flight Tests of a Twin-Engine Patrol Airplane. II Lateral-and Directional-Stability and -Control Characteristics. MR A5H30 (WR A-71), Aug. 1945.
- Ribner, Herbert S.: Attainment of a Straight-Line Trajectory for a Preset Guided Missile with Special Reference to Effect of Wing or Target Motion. MR L5H21b (WR L-590), Aug. 1945.
- Johnson, Harold I.: A Comparison of Data Obtained by Two Flight Techniques for Determining the Sideslip Characteristics of a Fighter Airplane. RB L5F25a (WR L-87), Aug. 1945.
- Johnson, Harold I.: An Approximate Determination of the Power Required To Move Control Surfaces as Related to Control-Booster Design. RB L5F27 (WR L-102), Sept. 1945.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Effect of Wing Modifications on the Longitudinal Stability of a Tailless All-Wing Airplane Model. ACR L5G23 (WR L-42), Sept. 1945.
- Johnson, Harold I. and Mungall, Robert G.: Flight Measurements of the Effect on Elevator Stick Forces of Stabilizer Incidence and Elevator Rib Spacing on the P-63A-1-BE Series Airplane. MR L5J09 (WR L-611), Oct. 1945.
- Sjoberg, S. A.: Flight Tests of Two Airplanes Having Moderately High Effective Dihedral and Different Directional Stability and Control Characteristics. CB L5H08 (WR L-40), Oct. 1945.
- Williams, Walter C.: A Flight Investigation of NACA Aileron Modifications for the Improvement of the Lateral Control Characteristics of a High-Speed Fighter Airplane. ACR L5J29 (WR L-194), Dec. 1945.
- McKinney, Marion O., Jr.: Experimental Determination of the Effect of Negative Dihedral on Lateral Stability and Control Characteristics at High Lift Coefficients. ARR L5J02 (WR L-54), Jan. 1946.
- Ashkenas, I. L.: The Development of a Lateral-Control System for Use with Large-Span Flaps. TN 1015, Jan. 1946.
- Seacord, Charles L., Jr. and Ankenbruck, Herman O.: Determination of the Stability and Control Characteristics of a Straight-Wing, Tailless Fighter-Airplane Model in the Langley Free-Flight Tunnel. ACR L5K05 (WR L-199), Feb. 1946.

- Hunter, Paul A. and Reeder, John P.: Flight Measurements to Determine Effect of a Spring-Loaded Tab on Longitudinal Stability of an Airplane. ARR L5120 (WR L-210), Feb. 1946.
- Drake, Hubert M.: The Effect of Lateral Area on the Lateral Stability and Control Characteristics of an Airplane as Determined by Tests of a Model in the Langley Free-Flight Tunnel. ARR L5L05 (WR L-103), Feb. 1946.
- Pearson, Henry A. and Aiken, William S., Jr.: Analysis of Effect of Rolling Pull-Outs on Wing and Aileron Loads of a Fighter Airplane. ARR L5104 (WR L-270), March 1946.
- Spreiter, John R. and Galster, George M.:
 Observations of Aileron Flutter on the
 Bell P-63A-6 Airplane in Flight at
 High Mach Numbers. ACR 6B08, April
 1946.
- Phillips, William H.: An Investigation of Additional Requirements for Satisfactory Elevator Control Characteristics. TN 1060, June 1946.
- Ankenbruck, Herman O.: Effects of Tip Dihedral on Lateral Stability and Control Characteristics as Determined by Tests of a Dynamic Model in the Langley Free-Flight Tunnel. TN 1059, July 1946.
- McKinney, Marion O., Jr.: Experimental Determination of the Effects of Dihedral, Vertical-Tail Area, and Lift Coefficient on Lateral Stability and Control Characteristics. TN 1094, July 1946.
- Drake, Hubert M.: Experimental Determination of the Effects of Directional Stability and Rotary Damping in Yaw on Lateral Stability and Control Characteristics. TN 1104, July 1946.
- Kleckner, Harold F.: Flight Tests of an All-Movable Horizontal Tail with Geared Unbalancing Tabs on the Curtiss XP-42 Airplane. TN 1139, Oct. 1946.
- Mungall, Robert G.: Flight Measurements of the Directional Stability and Control of a P-51D Airplane with a Horn-Balanced Rudder as Compared with Previously Tested Vertical-Tail Configurations. RM L6J25, Dec. 1946.
- Hanson, Carl M. and Anderson, Seth B.: Flight Tests of a Double-Hinged Horizontal Tail Surface with Reference to Longitudinal-Stability and -Control Characteristics. TN 1224, May 1947.

- Rathert, George A., Jr.: Flight Investigation of the Effects on Airplane Static Longitudinal Stability of a Bungee and Engine-Tilt Modifications. TN 1260, May 1947.
- Talmage, Donald B.: A Time History of Control Operation of a C-54 Airplane in Blind Landing Approaches. RM L7F20, July 1947.
- Forsyth, Charles M. and Gray, William E., Jr.: A Comparison of Flight-Test Results on a Scout-Bomber Airplane with 4.7° and with 10° Geometric Dihedral in the Wing Outer Panels. TN 1407, Aug. 1947.
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Lateral and Directional Stability and Control Characteristics of an Airplane Having a
 35° Sweptback Wing with 40-PercentSpan Slots and a Comparison with
 Wind-Tunnel Data. TN 1511, Jan. 1948.
- Hunter, Paul A.: Flight Measurements of the Flying Qualities of Five Light Airplanes. TN 1573, May 1948.
- Smith, Charles C., Jr.: The Effects of Fuel Sloshing on the Lateral Stability of a Free-Flying Airplane Model. RM L8C16, June 1948.
- McKinney, Marion O., Jr. and Shanks, Robert E.: Lateral Stability and Control Characteristics of a Free-Flying Model Having an Unswept Wing with an Aspect Ratio of 2. TN 1658, July 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Longitudinal Stability, Stalling, and Lift Characteristics of an Airplane Having a 35° Sweptback
 Wing Without Slots and with 40-Percent-Span Slots and a Comparison with
 Wind-Tunnel Data. TN 1679, Aug. 1948.
- Brewer, Gerald W. and May, Ralph W., Jr.: Investigation of a 1/7-Scale Powered Model of a Twin-Boom Airplane and a Comparison of Its Stability, Control, and Performance with Those of a Similar All-Wing Airplane. TN 1649, Oct. 1948.
- Johnson, Joseph L. and Sternfield, Leonard: A Theoretical Investigation of the Effect of Yawing Moment Due to Rolling on Lateral Oscillatory Stability. TN 1723, Oct. 1948.
- Talmage, Donald B. and Reeder, John P.: The Effects of Friction in the Control System on the Handling Qualities of a C-54D Airplane. RM L8G30a, Nov. 1948.

- Sjoberg, S. A. and Reeder, J. P.: Flight
 Measurements of the Stability, Control, and Stalling Characteristics of an
 Airplane Having a 35° Sweptback Wing
 Without Slots and with 80-PercentSpan Slots and a Comparison with WindTunnel Data. TN 1743, Nov. 1948.
- Reeder, John P. and Gustafson, F. B.: On the Flying Qualities of Helicopters. TN 1799, Jan. 1949.
- Talmage, Donald B. and Reeder, John P.: Lateral and Directional Stability and Control Characteristics of a C-54D Airplane. RM L8K30, March 1949.
- Anderson, Seth B.: Correlation of Pilot Opinion of Stall Warning with Flight Measurements of Various Factors Which Produce the Warning. TN 1868, April 1949.
- Liddell, Charles J., Jr.; Van Dyke, Rudolph D., Jr. and Heinle, Donovan R.: A Flight Determination of the Tolerable Range of Effective Dihedral on a Conventional Fighter Airplane. TN 1936, Aug. 1949.

MASS AND GYROSCOPIC PROBLEMS

(1.8.6)

- McKinney, Marion O., Jr. and Drake, Hubert M.: Correlation of Experimental and Calculated Effects of Product of Inertia on Lateral Stability. TN 1370, July 1947.
- Phillips, William H.: Effect of Steady Rolling on Longitudinal and Directional Stability. TN 1627, June 1948.
- Gracey, William: The Experimental Determination of the Moments of Inertia of Airplanes by a Simplified Compound-Pendulum Method. TN 1629, June 1948.
- Smith, Charles C., Jr.: The Effects of Fuel Sloshing on the Lateral Stability of a Free-Flying Airplane Model. RM L8C16, June 1948.
- Gale, Lawrence J. and Jones, Ira P., Jr.:
 Effects of Antispin Fillets and Dorsal
 Fins on the Spin and Recovery Characteristics of Airplanes as Determined
 from Free-Spinning-Tunnel Tests. TN
 1779, Dec. 1948.
- Klinar, Walter J. and Gale, Lawrence J.:
 Wind-Tunnel Investigation of the Spinning Characteristics of a Model of a
 Twin-Tail Low-Wing Personal-OwnerType Airplane with Linked and Unlinked
 Rudder and Aileron Controls. TN 1801,
 Jan. 1949.
- Dupleich, Paul: Rotation in Free Fall of Rectangular Wings of Elongated Shape. TM 1201, April 1949.
- Höhler, P.: The Infleunce of the Application of Power During Spin Recovery of Multiengine Airplanes. TM 1219, June 1949.

Loading

(1.9)

- Reid, H. J. E.: A Study of Airplane Maneuvers with Special Reference to Angular Velocities. Rept. 155, 1922.
- Warner, Edward P.: Factors of Safety. TM 242, Dec. 1923.
- Burgess, C. P.: Forces on Airships in Gusts. Rept. 204, 1924.
- Naatz, H.: Recent Researches in Airship Construction. I - Forces of Flow on a Moving Airship and the Effect of the Control Surfaces. TM 275, Aug. 1924.
- Zahm, A. F.; Smith, R. H. and Louden, F. A.: Air Forces, Moments and Damping on Model of Fleet Airship Shenandoah. Rept. 215, Sept. 1925.
- Anon: Airplane Strength Calculations and Static Tests in Russia (An Attempt at Standardization). TM 480, Sept. 1928.
- Load Assumptions for Calculating the Strength of Airplanes. From D.V.L. Building Specifications for Airplanes. TM 581, Sept. 1930.
- Scudder, N. F. and Kirschbaum, H. W.: A Preliminary Determination of Normal Accelerations on Racing Airplanes. TN 537, Aug. 1935.
- Ames, Milton B., Jr. and Sears, Richard I.: Determination of Control-Surface Characteristics from NACA Plain-Flap and Tab Data. TN 796, Feb. 1941.
- Jones, Robert T. and Greenberg, Harry: Effect of Hinge-Moment Parameters on Elevator Stick Forces in Rapid Maneuvers. Rept. 798, 1944.
- Phillips, William H.: The Use of Geared Spring Tabs for Elevator Control. RB L5A13 (WR L-30), Feb. 1945.
- Bielat, Ralph P.: A Simple Method for Estimating Terminal Velocity Including Effect of Compressibility on Drag. ACR L5G31 (WR L-78), Aug. 1945.
- Walker, Walter G. and Meadows, May T.: Analysis of V-G Records from the SNB-1 Airplane. MR L6F27a (WR L-759), July 1946.
- Reissner, Eric: Effect of Finite Span on the Airload Distributions for Oscillating Wings. I - Aerodynamic Theory of Oscillating Wings of Finite Span. TN 1194, March 1947.

Moeckel, W. E.: Effect of Yaw at Supersonic Speeds on Theoretical Aerodynamic Coefficients of Thin Pointed Wings with Several Types of Trailing Edge. TN 1549, March 1948.

WINGS

(1.9.1)

- Zahm, A. F. and Crook, L. H.: Airplane Stress Analysis. Rept. 82, 1920.
- Miller, Roy G.: Torsion of Wing Trusses at Diving Speeds. Rept. 104, 1920.
- Hoff, Wilhelm: Analysis of Stresses in German Airplanes. Rept. 143, 1922.
- Hamburger, H.: Practical Method for Balancing Airplane Moments. TN 179, Feb. 1924.
- Prandtl, L.: Induced Drag of Multiplanes. TN 182, March 1924.
- Scarborough, James B.: Some Problems on the Lift and Rolling Moment of Airplane Wings. Rept. 200, 1925.
- Load Assumptions for Calculating the Strength of Airplanes. From D.V.L. Building Specifications for Airplanes. TM 581, Sept. 1930.
- Schmidt, Wilhelm: Development of a Non-Autorotative Airplane Capable of Steep Landing. TM 650, Dec. 1931.
- Wenzinger, Carl J.: Pressure Distribution over an Airfoil Section with a Flap and Tab. Rept. 574, 1936.
- Pearson, H. A.: Theoretical Span Loading and Moments of Tapered Wings Produced by Aileron Deflection. TN 589, Jan. 1937.
- Stuper, J.: Effect of Propeller Slipstream of Wing and Tail. TM 874, Aug. 1938.
- Gothort, B.: Effect of Wing Loading, Aspect Ratio, and Span Loading on Flight Performances. TM 925, Jan. 1940.
- Wieghardt, Karl: Chordwise Load Distribution of a Simple Rectangular Wing. TM 963, Dec. 1940.
- Diehl, Walter S.: The Mean Aerodynamic Chord and the Aerodynamic Center of a Tapered Wing. Rept. 751, 1942.

Wings (Cont.)

- Sears, Richard I.: Wind-Tunnel Investigation of Control-Surface Characteristics. IX Some Analytical Considerations and Experimental Test Results for an Internally Balanced Flap. ARR (WR L-399), July 1942.
- Multhropp, H.: Aerodynamics of the Fuselage. TM 1036, Dec. 1942.
- Draley, Eugene C.: A Comparison at High Speed of the Aerodynamic Merits of Models of Medium Bombers Having Thickened Wing Roots and Having Wings with Nacelles. ACR 3L03 (WR L-390), Dec. 1943.
- Hildebrand, Francis B.: A Least-Quares Procedure for the Solution of the Lifting-Line Integral Equation. TN 925, Feb. 1944.
- Hildebrand, Francis B. and Reissner, Eric: The Influence of the Aerodynamic Span Effect on the Magnitude of the Torsional-Divergence Velocity and on the Shape of the Corresponding Deflection Mode. TN 926, Feb. 1944.
- Whitcomb, Richard T.: The Relation Between Spanwise Variations in the Critical Mach Number and Spanwise Load Distributions. CB L4L07 (WR L-182), Dec. 1944.
- Bailey, F. J., Jr.; Mathews, Charles W. and Thompson, Jim Rogers: Drag Measurements at Transonic Speeds on a Freely Falling Body. ACR L5E03, June 1945.
- Ferri, Antonio: Completed Tabulation in the United States of Tests of 24 Airfoils at High Mach Numbers (Derived from Interrupted Work at Guidonia, Italy in the 1.31- by 1.74-Foot High-Speed Tunnel). ACR L5E21 (WR L-143), June 1945.
- Block, Myron J. and Katzoff, S.: Tables and Charts for the Evaluation of Profile Drag from Wake Surveys at High Subsonic Speeds. RB L5F15a (WR L-107), July 1945.
- Lindsey, W. F.: Effect of Compressibility on the Pressures and Forces Acting on a Modified 65, 3-019 Airfoil Having a 0.20-Chord Flap. ACR L5G31a (WR L-76), Jan. 1946.
- Brown, Harvey H. and Clousing, Lawrence A.: Wing Pressure-Distribution Measurements up to 0.866 Mach Number in Flight on a Jet-Propelled Airplane. TN 1181, March 1947.

- Margolis, Kenneth: Supersonic Wave Drag of Sweptback Tapered Wings at Zero Lift. TN 1448, Oct. 1947.
- Moeckel, W. E.: Effect of Yaw at Supersonic Speeds on Theoretical Aerodynamic Coefficients of Thin Pointed Wings with Several Types of Trailing Edge. TN 1549, March 1948.
- Margolis, Kenneth: Supersonic Wave Drag of Nonlifting Sweptback Tapered Wings with Mach Lines Behind the Line of Maximum Thickness. TN 1672, Aug. 1948.
- Lowry, John G. and Schneiter, Leslie E.: Estimation of Effectiveness of Flap-Type Controls on Sweptback Wings. TN 1674, Aug. 1948.
- Diederich, Franklin W. and Budiansky, Bernard: Divergence of Swept Wings. TN 1680, Aug. 1948.
- Cooney, T. V. and Wollner, Bertram C.:
 A Comparison of Flight Measurements
 with Calculations of the Loss in Rolling
 Effectiveness Due to Wing Twist. RM
 L8F07, Aug. 1948.
- Wall, Nancy E.: Chordwise Pressure Distributions on a 12-Foot-Span Wing of NACA 66-Series Airfoil Sections up to a Mach Number of 0.60. TN 1696, Oct. 1948.
- Cooper, Morton and Korycinski, Peter F.: The Effects of Compressibility on the Lift, Pressure, and Load Characteristics of a Tapered Wing of NACA 66-Series Airfoil Sections. TN 1697, Oct. 1948.
- Hieser, Gerald and Whitcomb, Charles F.:
 Investigation of the Effects of a Nacelle
 on the Aerodynamic Characteristics of
 a Swept Wing and the Effects of Sweep
 on a Wing Alone. TN 1709, Oct. 1948.
- Weil, Joseph and Sleeman, William C., Jr.:
 Prediction of the Effects of Propeller
 Operation on the Static Longitudinal
 Stability of Single-Engine Tractor
 Monoplanes with Flaps Retracted. TN
 1722, Oct. 1948.
- Ivey, H. Reese and Morrissette, Robert R.: An Approximate Determination of the Lift of Slender Cylindrical Bodies and Wing-Body Combinations at Very High Supersonic Speeds. TN 1740, Oct. 1948.
- Anderson, Roger A. and Houbolt, John C.:
 Determination of Coupled and Uncoupled
 Modes and Frequencies of Natural Vibration of Swept and Unswept Wings
 from Uniform Cantilever Modes. TN
 1747, Nov. 1948.

Wings (Cont.)

- Diederich, Franklin W.: Calculation of the Effects of Structural Flexibility on Lateral Control of Wings of Arbitrary Plan Form and Stiffness. RM L8H24a, Dec. 1948.
- West, F. E., Jr. and Hallissy, J. M., Jr.:
 Effects of Compressibility on NormalForce, Pressure, and Load Characteristics of a Tapered Wing of NACA 66Series Airfoil Sections with Split Flaps.
 TN 1759, Dec. 1948.
- Heaslet, Max. A.; Lomax, Harvard and Spreiter, John R.: Linearized Compressible-Flow Theory for Sonic Flight Speeds. TN 1824, March 1949.
- Heaslet, Max. A. and Lomax, Harvard: The Application of Green's Theorem to the Solution of Boundary-Value Problems in Linearized Supersonic Wing Theory. TN 1767, April 1949.
- West, F. E., Jr. and Himka, T.: Effects of Compressibility on Lift and Load Characteristics of a Tapered Wing of NACA 64-210 Airfoil Sections up to a Mach Number of 0.60. TN 1877, May 1949.
- Diederich, Franklin W.: Calculation of the Aerodynamic Loading of Flexible Wings of Arbitrary Plan Form and Stiffness. TN 1876, April 1949.
- Nielsen, Jack N. and Matteson, Frederick H.: Calculative Method for Estimating the Interference Pressure Field at Zero Lift on a Symmetrical Swept-Back Wing Mounted on a Circular Cylindrical Body. RM A9E19, Aug. 1949.

STEADY LOADS (1.9.1.1)

- Stelmachowski, Ing.: Loads and Calculations of Army Airplanes. TN 28, Feb. 1921.
- Betz, A.: Influence of Span and Load Per Square Meter on the Air Forces of the Supporting Surface. TN 41, March 1921.
- Proll, A.: Pressure Measurements During Flight. TM 58, Nov. 1921.
- Dorand, Col.: Influence of Elliptical Distribution of Lift on Strength of Airplane Wings. TM 80, April 1922.
- Munk, Max M.: The Twisted Wing with Elliptical Plan Form. TN 109, Aug. 1922.
- Mises: Location of Center of Pressure of Airplane Wings. TM 165, Nov. 1922.

- Bacon, David L.: The Distribution of Lift Over Wing Tips and Ailerons. Rept. 161, 1923.
- Pröll, A.: Experiments with Fabrics for Covering Airplane Wings To Determine Effect of Method of Installation. TN 168, Dec. 1923.
- Norton, F. H.: Pressure Distribution over the Wings of an MB-3 Airplane in Flight. Rept. 193, 1924.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Reid, Elliott G.: Pressure Distribution over Thick Tapered Airfoils, NACA 81, USA 27C Modified and USA 35. Rept. 229, 1926.
- Fairbanks, A. J.: Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. Rept. 254, 1927.
- Briggs, L. J. and Dryden, H. L.: Pressure Distribution over Airfoils at High Speeds. Rept. 255, 1927.
- Munk, Max M.: The Air Forces on a Systematic Series of Biplane and Triplane Cellule Models. Rept. 256, 1927.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Smith, R. H.: Air Force and Moment for N-20 Wing with Certain Cut-Outs. Rept. 266, 1927.
- Knight, Montogmery and Loeser, Oscar, Jr.: Pressure Distribution over a Rectangular Monoplane Wing Model up to 90 ° Angle of Attack. Rept. 288, 1928.
- Rhode, R. V.: Pressure Distribution on Wing Ribs of the VE-7 and TS Airplanes in Flight. II - Pull-Ups. TN 277, Jan. 1928.
- Shoemaker, James M.: Preliminary Biplane Tests in the Variable Density Wind Tunnel. TN 289, June 1928.
- Lachmann, G.: The Span as a Fundamental Factor in Airplane Design. TM 479, Sept. 1928.
- Loeser, Oscar E., Jr.: Pressure Distribution Tests on PW-9 Wing Models from -18° Through 90° Angle of Attack. Rept. 296, 1929.
- Jacobs, Eastman N.: Pressure Distribution on a Slotted R.A.F. 31 Airfoil in the Variable Density Wind Tunnel. TN 308, June 1929.

- Steady Loads Wings (Cont.)
- Katzmayr, Richard: Travel of the Center of Pressure of Airfoils Transversely to the Air Stream. TM 530, Sept. 1929.
- Wenzinger, Carl J. and Loeser, Oscar, Jr.: Wind Tunnel Pressure Distribution Tests on an Airfoil with Trailing Edge Flap. TN 326, Oct. 1929.
- Wenzinger, Carl J.: Pressure Distribution over a Thick, Tapered and Twisted Monoplane Wing Model - NACA 81-J. Rept. 367, 1930.
- Knight, Montgomery and Noyes, Richard W.: Span Load Distribution on Two Monoplane Wing Models as Affected by Twist and Sweepback. TN 346, July 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Douglas Wing Tip on a Biplane in Flight. TN 347, Aug. 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: The Pressure Distribution over a Square Wing Tip on a Biplane in Flight. TN 360, Jan. 1931.
- Rhode, Richard V. and Lunquist, Eugene E.: The Pressure Distribution over a Semicircular Wing Tip on a Biplane in Flight. TN 379, May 1931.
- Sänger, Eugen: Accurate Calculation of Multispar Cantilever and Semicantilever Wings with Parallel Webs Under Direct and Indirect Loading. TM 662, March 1932.
- Rhode, Richard V.: The Pressure Distribution over a Standard and a Modified Navy Elliptical Wing Tip on a Biplane in Flight. TN 433, Oct. 1932.
- Rhode, Richard V.: The Pressure Distribution over a Long Elliptical Wing Tip on a Biplane in Flight. TN 437, Dec. 1932.
- Anderson, Raymond F.: Charts for Determining the Pitching Moment of Tapered Wings with Sweepback and Twist. TN 483, Dec. 1933.
- Rhode, Richard V.: The Influence of Tip Shape on the Wing Load Distribution as Determined by Flight Tests. Rept. 500, 1934.
- Dätwyler, G.: Calculations of the Effect of Wing Twist on the Air Forces Acting on a Monoplane Wing. TN 520, March 1935.

- Parsons, John F.: Full-Scale Force and Pressure-Distribution Tests on a Tapered U.S.A. 45 Airfoil. TN 521, March 1935.
- Pinkerton, Robert M.: Calculated and Measured Pressure Distributions over the Midspan Section of the NACA 4412 Airfoil. Rept. 563, 1936.
- Pearson, H. A.: Span Load Distribution for Tapered Wings with Partial-Span Flaps. Rept. 585, 1937.
- Pearson, H. A.: Pressure-Distribution Measurements on an 0-2H Airplane in Flight. Rept. 590, 1937.
- Parsons, John F. and Silverstein, Abe: Full-Scale Span Load Distribution on a Tapered Wing with Split Flaps of Various Spans. TN 591, Feb. 1937.
- Pearson, H. A.: Empirical Corrections to the Span Load Distribution at the Tip. TN 606, Aug. 1937.
- Pinkerton, Robert M.: The Variation with Reynolds Number of Pressure Distribution over an Airfoil Section. Rept. 613, 1938.
- Wenzinger, Carl J.: Pressure Distribution over an NACA 23012 Airfoil with an NACA 23012 External-Airfoil Flap. Rept. 614, 1938.
- Wenzinger, Carl J. and Anderson, Walter B.: Pressure Distribution over Airfoils with Fowler Flaps. Rept. 620, 1938.
- Jacobs, Eastman N. and Rhode, R. V.:
 Airfoil Section Characteristics as
 Applied to the Prediction of Air
 Forces and Their Distribution on
 Wings. Rept. 631, 1938.
- Wenzinger, Carl J. and Delano, James B.:
 Pressure Distribution over an NACA
 23012 Airfoil with a Slotted and a
 Plain Flap. Rept. 633, 1938.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Wenzinger, Carl J. and Ames, Milton B., Jr.: Wind-Tunnel Investigation of Rectangular and Tapered NACA 23012 Wings with Plain Ailerons and Full-Span Split Flaps. TN 661, Aug. 1938.
- Silverstein, Abe and Katzoff, S.: Design Charts for Predicting Downwash Angles and Wake Characteristics Behind Plain and Flapped Wings. Rept. 648, 1939.

- Steady Loads Wings (Cont.)
- Kuethe, Arnold M.: Circulation Measurements About the Tip of an Airfoil During Flight Through a Gust. TN 685, Feb. 1939.
- Kuchemann, D.: Investigation of the Lift Distribution over the Separate Wings of a Biplane. TM 889, March 1939.
- Wenzinger, Carl J. and Rogallo, Francis M.: Résumé of Air-Load Data on Slats and Flaps. TN 690, March 1939.
- Sherman, Albert: A Simple Method of Obtaining Span Load Distributions. TN 732, Oct. 1939.
- Troller, Th. and Rokus, F.: Pressure-Distribution Measurements on a Tapered Wing with a Partial-Span Split Flap in Curved Flight. TN 735, Nov. 1939.
- Becker, John V.: Boundary-Layer Transition on the NACA 0012 and 23012
 Airfoils in the 8-Foot High-Speed
 Wind Tunnel. ACR (WR L-682), Jan. 1940.
- Delano, James B.: Wind-Tunnel Tests of the NACA 45-125 Airfoil a Thick Airfoil for High-Speed Airplanes. ACR, Feb. 1940.
- Pearson, Henry A.: A Study of Unsymmetrical-Loading Conditions. TN 757, April 1940.
- Schrenk, O.: A Simple Approximation Method for Obtaining the Spanwise Lift Distribution. TM 948, Aug. 1940.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23021 Airfoil with a Slotted and a Split Flap. Rept. 718, 1941.
- Mutterperl, William: The Calculation of Span Load Distributions on Swept-Back Wings. TN 834, Dec. 1941.
- Harris, Thomas A. and Lowry, John G.: Pressure Distribution over an NACA 23012 Airfoil with a Fixed Slot and a Slotted Flap. Rept. 732, 1942.
- Naumann, A.: Pressure Distribution on Wings in Reversed Flow. TM 1011, April 1942.
- Becker, John B.: High-Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.
- Kaul, Hans W.: Statistical Analysis of Service Stresses in Aircraft Wings. TM 1015, June 1942.

- Harmon, Hubert N.: Wind-Tunnel Tests of Several Duct Entrances in the Leading Edge of an NACA 23018 Wing. ARR, Oct. 1942.
- Cohen, Doris: Theoretical Distribution of Load over a Swept-Back Wing. ARR (WR L-221), Oct. 1942.
- Pearson, Henry A.: Derivation of Charts for Determining the Horizontal Tail Load Variation with Any Elevator Motion. Rept. 759, 1943.
- Stack, John; Fedziuk, Henry A. and Cleary, Harold E.: Preliminary Investigation of the Effect of Compressibility on the Maximum Lift Coefficient. ACR, Feb. 1943.
- Rhode, Richard V. and Pearson, H. A.:
 Observations of Compressibility
 Phenomena in Flight. ACR 3D15 (WR L-417), April 1943.
- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.: Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3I30 (WR W-6), Sept. 1943.
- Boshar, John: The Determination of Span Load Distribution at High Speeds by Use of High-Speed Wind-Tunnel Section Data. ACR 4B22 (WR L-436), Feb. 1944.
- Nissen, James M. and Gadeberg, Burnett L.: Effect of Mach and Reynolds Number on the Power-Off Maximum Lift Coefficient Obtainable on a P-39N-1 Airplane as Determined in Flight. ACR A4F28, June 1944.
- Luoma, Arvo A.: Effect of Compressibility on Pressure Distribution over an Airfoil with a Slotted Frise Aileron. ACR L4G12 (WR L-266), July 1944.
- Smith, Norman F.: High-Speed Investigation of Low-Drag Wing Inlets. ACR L4I18 (WR L-732), Sept. 1944.
- Cohen, Doris: A Method for Determining the Camber and Twist of a Surface to Support a Given Distribution of Lift. Rept. 826, 1945.
- Spreiter, John R.; Galster, George M. and Blair, William K.: Effect of Mach and Reynolds Numbers on the Maximum Lift Coefficient Obtainable in Gradual and Abrupt Stalls of a Pursuit Airplane Equipped with Low-Drag Wing. MR A5G06 (WR A-5), July 1945.

- Pearson, E. O., Jr.; Evans, A. J. and West, F. E., Jr.: Effects of Compressibility on the Maximum Lift Characteristics and Spanwise Load Distribution of a 12-Foot-Span Fighter-Type Wing of NACA 230-Series Airfoil Sections. ACR L5G10 (WR L-51), Nov. 1945.
- Clousing, Lawrence A.; Turner, William N. and Rolls, L. Stewart: Measurements in Flight of the Pressure Distribution on the Right Wing of a Pagn-1 Airplane at Several Values of Mach Number. Rept. 859, 1946.
- Spreiter, John R. and Steffen, Paul J.: The Effect of Mach and Reynolds Numbers on Maximum Lift Coefficient. TN 1044, March 1946.
- Visconti, Fioravante: Wind-Tunnel Investigation of Air Loads over a Double Slotted Flap on the NACA 65(216)-215, a = 0.8 Airfoil Section. RM L7A30, April 1947.
- Sandahl, Carl A. and Vollo, Samuel D.:
 Wind-Tunnel Investigation of the Air
 Load Distribution on Two Combinations
 of Lifting Surface and Fuselage. TN
 1295, May 1947.
- Fitzpatrick, James E. and Furlong, G. Chester: Effect of Spoiler-Type Lateral-Control Devices on the Twisting Moments of a Wing of NACA 230-Series Airfoil Sections. TN 1298, May 1947.
- Jacobs, W.: Pressure-Distribution Measurements on Unyawed Swept-Back Wings. TM 1164, July 1947.
- Mendelsohn, Robert A. and Brewer, Jack D.: Comparison Between the Measured and Theoretical Span Loadings on a Moderately Swept-Forward and a Moderately Swept-Back Semispan Wing. TN 1351, July 1947.
- Heaslet, Max A.; Lomax, Harvard and Jones, Arthur L.: Volterra's Solution of the Wave Equation as Applied to Three-Dimensional Supersonic Airfoil Problems. TN 1412, Aug. 1947.
- Barnes, Robert H.: High-Speed Load Distribution on the Wing of a 3/16-Scale Model of a Scout-Bomber Airplane with Flaps Deflected. RM A7D23, Aug. 1947.
- Van Dorn, Nicholas H. and DeYoung, John: A Comparison of Three Theoretical Methods of Calculating Span Load Distribution on Swept Wings. TN 1476, Nov. 1947.

- Rolls, L. Stewart: Comparison Between Flight Measured and Calculated Span Load Distribution at High Mach Numbers. RM A7G17, Nov. 1947.
- DeYoung, John: Theoretical Additional Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1491, Dec. 1947.
- Moeckel, W. E.: Effect of Yaw at Supersonic Speeds on Theoretical Aerodynamic Coefficients of Thin Pointed Wings with Several Types of Trailing Edge. TN 1549, March 1948.
- Frick, Charles W., Jr.: Application of the Linearized Theory of Supersonic Flow to the Estimation of Control-Surface Characteristics. TN 1554, March 1948.
- Cohen, Doris: The Theoretical Lift of Flat Swept-Back Wings at Supersonic Speeds. TN 1555, March 1948.
- Diederich, Franklin W.: A Simple Approximate Method for Obtaining Spanwise Lift Distributions over Swept Wings. RM L7107, May 1948.
- Evvard, John C.: Theoretical Distribution of Lift on Thin Wings at Supersonic Speeds (An Extension). TN 1585, May 1948.
- Heaslet, Max. A. and Lomax, Harvard: The Calculation of Downwash Behind Supersonic Wings with an Application to Triangular Plan Forms. TN 1620, June 1948.
- Wick, Bradford H.: Chordwise and Spanwise Loadings Measured at Low Speed on a Triangular Wing Having an Aspect Ratio of Two and an NACA 0012 Airfoil Section. TN 1650, June 1948.
- Wollner, Bertram C.: Charts for Determining Preliminary Values of Span-Load, Shear, Bending-Moment, and Accumulated-Torque Distributions of Swept Wings of Various Taper Ratios. RM L8A26, July 1948.
- Spreiter, John R.: Aerodynamic Properties of Slender Wing-Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1662, July 1948.
- Cohen, Clarence B. and Evvard, John C.: Graphical Method of Obtaining Theoretical Lift Distributions on Thin Wings at Supersonic Speeds. TN 1676, Aug. 1948.
- Mirels, Harold: Theoretical Wave Drag and Lift of Thin Supersonic Ring Airfoils. TN 1678, Aug. 1948.

- Steady Loads Wings (Cont.)
- Moeckel, W. E. and Evvard, J. C.: Load Distributions Due to Steady Roll and Pitch for Thin Wings at Supersonic Speeds. TN 1689, Aug. 1948.
- Cohen, Clarence B.: Influence of Leading-Edge Suction on Lift-Drag Ratios of Wings at Supersonic Speeds. TN 1718, Oct. 1948.
- Aiken, William S., Jr.: Flight Determination of Wing and Tail Loads on a Fighter-Type Airplane by Means of Strain-Gage Measurements. TN 1729, Oct. 1948.
- Harmon, Sidney M.: Stability Derivatives of Thin Rectangular Wings at Supersonic Speeds. Wing Diagonals Ahead of Tip Mach Lines. TN 1706, Nov. 1948.
- Mirels, Harold: Theoretical Method for Solution of Aerodynamic Forces on Thin Wings in Nonuniform Supersonic Stream with an Application to Tail Surfaces. TN 1736, Nov. 1948.
- Stevens, Victor I.: Theoretical Basic Span Loading Characteristics of Wings with Arbitrary Sweep, Aspect Ratio, and Taper Ratio. TN 1772, Dec. 1948.
- Baldwin, Barrett S., Jr.: Triangular Wings Cambered and Twisted to Support Specified Distributions of Lift at Supersonic Speeds. TN 1816, Feb. 1949.
- Bird, John D.: Some Theoretical Low-Speed Span Loading Characteristics of Swept Wings in Roll and Sideslip. TN 1839, March 1949.
- Spreiter, John R.: Aerodynamic Properties of Cruciform-Wing and Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1897, June 1949.
- Mirels, Harold and Haefeli, Rudolph C.: Line-Vortex Theory for Calculation of Supersonic Downwash. TN 1925, Aug. 1949.

MANEUVERING LOADS (1.9.1.2)

- Norton, F. H. and Allen, E. T.: Accelerations in Flight. Rept. 99, 1921.
- Norton, F. H. and Carroll, T.: The Vertical, Longitudinal, and Lateral Accelerations Experienced by an S.E.5A Airplane While Maneuvering. Rept. 163, 1923.
- Norton, F. H.: Pressure Distribution over the Wings of an MB-3 Airplane in Flight. Rept. 193, 1924.

- Munk, Max M.: On the Distribution of Lift Along the Span of an Airfoil with Displaced Ailerons. TN 195, June 1924.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Munk, Max M.: Note on the Air Forces on a Wing Caused by Pitching. TN 217, March 1925.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Miller, Roy G.: A Load Factor Formula. TN 263, Aug. 1927.
- Rhode, R. V.: Pressure Distribution on Wing Ribs of the VE-7 and TS Airplanes in Flight. II Pull-Ups. TN 277, Jan. 1928.
- Wieselsberger, C.: Theoretical Investigation of the Effect of the Ailerons on the Wing of an Airplane. TM 510, April 1929.
- Vogt, R.: Unsymmetrical Forces in an Airplane Cell. TM 539, Nov. 1929.
- Rhode, Richard V.: The Pressure Distribution over the Wings and Tail Surfaces of a PW-9 Pursuit Airplane in Flight. Rept. 364, 1930.
- Rhode, Richard V. and Pearson, Henry A.: A Method for Computing Leading-Edge Loads. Rept. 413, 1931.
- Garrick, I. E.: Propulsion of a Flapping and Oscillating Airfoil. Rept. 567, 1936.
- Pearson, H. A.: Pressure-Distribution Measurements on an 0-2H Airplane in Flight. Rept. 590, 1937.
- Pearson, H. A.: Empirical Corrections to the Span Load Distribution at the Tip. TN 606, Aug. 1937.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Troller, Th. and Rokus, F.: Pressure-Distribution Measurements on a Tapered Wing with a Full-Span Split Flap in Curved Flight. TN 683, Jan. 1939.
- Pearson, H. A. and Garvin, J. B.: An Analytical Study of Wing and Tail Loads Associated with an Elevator Deflection. ARR (WR L-443), June 1941.

- Maneuvering Loads Wings (Cont.)
- Kaul, Hans W.: Statistical Analysis of Service Stresses in Aircraft Wings. TM 1015, June 1942.
- Langley Memorial Aeronautical Laboratory: British Drawing of "G" Restrictors and Control Booster. CB, Oct. 1942.
- Pearson, Henry A. and Smull, Leland K .: Control-Motion Studies of the PBM-3 Flying Boat in Abrupt Pull-Ups. MR (WR L-577), Nov. 1942.
- Pearson, Henry A.: Derivation of Charts for Determining the Horizontal Tail Load Variation with Any Elevator Motion. Rept. 759, 1943.
- Pearson, H. A.: Time-Velocity-Altitude Relations for an Airplane Diving in a Standard Atmosphere. ARR (WR L-291), March 1943.
- Rhode, Richard V. and Pearson, H. A .: Observations of Compressibility Phenomena in Flight. ACR 3D15 (WR L-417), April 1943.
- Pearson, Henry A. and Aiken, William S., Jr.: Charts for the Determination of Wing Torsional Stiffness Required for Specified Rolling Characteristics or Aileron Reversal Speed. Rept. 799, 1944.
- Nissen, James M.; Gadeberg, Burnett L. and Hamilton, William T .: Correlation of the Drag Characteristics of a P-51B Airplane Obtained from High-Speed Wind Tunnel and Flight Tests. ACR A4K02 (WR A-62), Feb. 1945.
- Spreiter, John R.; Galster, George M. and Blair, William K .: Effect of Mach and Reynolds Numbers on the Maximum Lift Coefficient Obtainable in Gradual and Abrupt Stalls of a Pursuit Airplane Equipped with Low-Drag Wing. MR A5G06 (WR A-5), July 1945.
- Newell, Joseph S.: A Preliminary Survey of Existing Information Pertaining to Dynamic Loads in Aircraft Structures. CB 5H03, Aug. 1945.
- Matheny, Cloyce E.: Comparison Between Calculated and Measured Loads on Wing and Horizontal Tail in Pull-Up Maneuvers. ARR L5H11 (WR L-193), Oct. 1945.
- Pearson, Henry A. and Aiken, William S., Jr.: Analysis of Effect of Rolling Pull-Outs on Wing and Aileron Loads of a Fighter Airplane. ARR L5104 (WR L-270), March 1946.

- Brown, Clinton E. and Adams, Mac C .: Damping in Pitch and Roll of Triangular Wings at Supersonic Speeds. TN 1566, April 1948.
- Heaslet, Max. A. and Lomax, Harvard: Two-Dimensional Unsteady Lift Problems in Supersonic Flight. TN 1621, June 1948.
- Wollner, Bertram C .: Charts for Determining Preliminary Values of Span-Load, Shear, Bending-Moment, and Accumulated-Torque Distributions of Swept Wings of Various Taper Ratios. RM L8A26, July 1948.
- Moeckel, W. E. and Evvard, J. C.: Load Distributions Due to Steady Roll and Pitch for Thin Wings at Supersonic Speeds. TN 1689, Aug. 1948.
- Evvard, John C.: A Linearized Solution for Time-Dependent Velocity Potentials Near Three-Dimensional Wings at Supersonic Speeds. TN 1699, Sept. 1948.
- Aiken, William S., Jr.: Flight Determination of Wing and Tail Loads on a Fighter-Type Airplane by Means of Strain-Gage Measurements. TN 1729, Oct. 1948.
- Harper, Paul W. and Flanigan, Roy E .: Investigation of the Variation of Maximum Lift for a Pitching Airplane Model and Comparison with Flight Results. TN 1734, Oct. 1948.
- Frick, Charles W. and Chubb, Robert S.: The Longitudinal Stability of Elastic Swept Wings at Supersonic Speed. TN 1811, Feb. 1949.

GUST LOADS (1.9.1.3)

- Hunsaker, J. C.: Report on Behavior of Aeroplanes in Gusts. Part I - Experimental Analysis of Inherent Longitudinal Stability for a Typical Biplane. Wilson, E. B.: Part II - Theory of an Airplane Encountering Gusts. Rept. 1, 1915.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Rhode, Richard V. and Lundquist, Eugene E.: Preliminary Study of Applied Load Factors in Bumpy Air. TN 374, April 1931.
- Blenk, Hermann; Hertel, Heinrich and Thalau, Karl: The German Investigation of the Accident at Meopham (England). TM 669, April 1932.

- Gust Loads Wings (Cont.)
- Kramer, Max: Increase in the Maximum Lift of an Airplane Wing Due to a Sudden Increase in Its Effective Angle of Attack Resulting from a Gust. TM 678, July 1932.
- Kuethe, Arnold M.: Circulation Measurements About the Tip of an Airfoil During Flight Through a Gust. TN 685, Feb. 1939.
- Donely, Philip: An Experimental Investigation of the Normal Acceleration of an Airplane Model in a Gust. TN 706, May 1939.
- Pearson, Henry Adolph: Acceleration, Stress, and Deflection Measurements on the XB-15 Bomber in Gusty Air. MR (WR L-540), June 1939.
- Donely, Philip and Shufflebarger, C. C.: Tests in the Gust Tunnel of a Model of the XBM-1 Airplane. TN 731, Oct. 1939.
- Donely, Philip: Effective Gust Structure at Low Altitudes as Determined from the Reactions of an Airplane. Rept. 692, 1940.
- Donely, Philip and Shufflebarger, C. C.: Tests of a Gust-Alleviating Flap in the Gust Tunnel. TN 745, Jan. 1940.
- Pearson, Henry A.: A Study of Unsymmetrical-Loading Conditions. TN 757, April 1940.
- Donely, Philip; Pierce, Harold B. and Pepoon, Philip W.: Measurements and Analysis of the Motion of a Canard Airplane Model in Gusts. TN 758, April 1940.
- Shufflebarger, C.C.: Tests of a Gust-Alleviating Wing in the Gust Tunnel. TN 802, April 1941.
- Rhode, Richard V. and Pearson, Henry A.:
 A Semi-Rational Criterion for Unsymmetrical Gust Loads. ARR (WR L-418),
 Aug. 1941.
- Pierce, Harold B.: Dynamic Stress Calculations for Two Airplanes in Various Gusts. ARR (WR L-484), Sept. 1941.
- Flight Research Loads Section: XC-35
 Gust Research Project Bulletin No. 1.
 Operations in Vicinity of Cold Front,
 May 23, 1941. Evaluation of Maximum Gust Intensities. ARR, Sept.
 1941.
- Kaul, Hans W.: Statistical Analysis of the Time and Fatigue Strength of Aircraft Wing Structures. TM 992, Oct. 1941.

- Flight Research Loads Section: XC-35 Gust Research Project Bulletin No. 2. Operations in Vicinity of Cold Front, May 23, 1941. Reactions of Pilot's Instruments. ARR, Oct. 1941.
- Flight Research Loads Section: XC-35
 Gust Research Project Bulletin No. 3.
 Operations in Cumulo-Nimbus and
 Cumulus Congestus Clouds on July 3,
 1941. Maximum Gust Intensities. RB,
 March 1942.
- Flight Research Loads Section: XC-35 Gust Research Project - Operation in Cumulus Congestus Cloud on July 31, 1941 - Maximum Gust Intensities. RB (WR L-555), April 1942.
- Flight Research Loads Section: XC-35 Gust Research Project Bulletin No. 5. Operations Near Cold Front on August 12, 1941. Maximum Gust Intensities. RB, April 1942.
- Flight Research Loads Section: XC-35 Gust Research Project - Bulletin No. 6. Preliminary Analysis of Gust Measurements. RB, April 1942.
- Kaul, Hans W.: Statistical Analysis of Service Stresses in Aircraft Wings. TM 1015, June 1942.
- Walker, Walter G.: Summary of V-G Records Taken on Transport Airplanes from 1932 to 1942. RB (WR L-453), July 1942.
- Reisert, Thomas D.: Tests of a 1/17-Scale Model of the XBDR-1 Airplane in the NACA Gust Tunnel - TED 2402. MR (WR L-539), Feb. 1944.
- Walker, Walter G.: Notes on Unusual V-G Records from Transport Airplanes. RB L4H17 (WR L-36), Aug. 1944.
- Rhode, Richard V. and Donely, Philip: Frequency of Occurrence of Atmospheric Gusts and of Related Loads on Airplane Structures. ARR L4I21 (WR L-121), Nov. 1944.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.
- Peiser, A. M. and Wilkerson, M.: A Method of Analysis of V-G Records from Transport Operations. Rept. 807, 1945.
- Reisert, Thomas D.: Frequency of Occurrence of Critical Gust Loads on Overloaded Airplanes. ARR L5B14 (WR L-73), March 1945.

- Gust Loads Wings (Cont.)
- Tolefson, H.B.: Airspeed Fluctuations as a Measure of Atmospheric Turbulence. ARR L5F27 (WR L-72), July 1945.
- Newell, Joseph S.: A Preliminary Survey of Existing Information Pertaining to Dynamic Loads in Aircraft Structures. CB 5H03, Aug. 1945.
- Putnam, Abbott A. and Reisert, Thomas D.: An Analysis of the Fatigue Life of an Airplane Wing Structure Under Overload Conditions. RB L5K29 (WR L-10), Feb. 1946.
- Tolefson, H. B. and Pratt, K. G.: An Analysis of the Indications of the University of Chicago Airborne Turbulence Indicator in Gusty Air. MR L6G08 (WR L-723), Aug. 1946.
- Gassner, E.: Strength Investigations in Aircraft Construction Under Repeated Application of the Load. TM 1087, Aug. 1946.
- Peiser, A. M. and Walker, W. G.: An Analysis of the Airspeeds and Normal Accelerations of Boeing S-307 Airplanes in Commercial Transport Operation. TN 1141, Sept. 1946.
- Peiser, A. M.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-3 Airplanes in Commercial Transport Operation. TN 1142, Sept. 1946.
- Tolefson, Harold B.: Preliminary Analysis of NACA Measurements of Atmospheric Turbulence Within a Thunderstorm U. S. Weather Bureau Thunderstorm Project. TN 1233, March 1947.
- Bland, Reginald B. and Reisert, T. D.: An Application of Statistical Data in the Development of Gust-Load Criterions. TN 1268, April 1947.
- Putnam, Abbott A.: An Improved Method for Calculating the Dynamic Response of Flexible Airplanes to Gusts. TN 1321, May 1947.
- Pierce, Harold B.: Investigation of the Dynamic Response of Airplane Wings to Gusts. TN 1320, June 1947.
- Press, Harry: The Effect of Sample Size on the Determination of Maximum Gust Velocities in Clouds. RM L7H27, Oct. 1947.
- Pierce, Harold B.: Tests of a 45° Sweptback-Wing Model in the Langley Gust Tunnel. TN 1528, Feb. 1948.

- Gringorten, I. I. and Press, H.: A Meteorological Measure of Maximum Gust Velocities in Clouds. TN 1569, April 1948.
- Heaslet, Max. A. and Lomax, Harvard: Two-Dimensional Unsteady Lift Problems in Supersonic Flight. TN 1621, June 1948.
- Tolefson, H. B.: An Analysis of the Variation with Altitude of Effective Gust Velocity in Convective-Type Clouds. TN 1628, June 1948.
- Press, Harry: A Statistical Analysis of Gust-Velocity Measurements as Affected by Pilots and Airplanes. TN 1645, June 1948.
- Pierce, Harold B. and Trauring, Mitchell: Gust-Tunnel Tests to Determine Influence of Airfoil Section Characteristics on Gust-Load Factors. TN 1632, July 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Martin M-130 Airplanes in Commercial Transport Operation. TN 1693, Sept. 1948.
- Evvard, John C.: A Linearized Solution for Time-Dependent Velocity Potentials Near Three-Dimensional Wings at Supersonic Speeds. TN 1699, Sept. 1948.
- Pierce, Harold B.: Gust-Tunnel Investigation of a 45° Sweptforward-Wing Model. TN 1717, Oct. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Sikorsky S-42A Airplanes in Commercial Transport Operation. TN 1733, Oct. 1948.
- Mickleboro, Harry C.: Evaluation of a Fixed Spoiler as a Gust Alleviator. TN 1753, Nov. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-2 Airplanes in Commercial Transport Operation. TN 1754, Nov. 1948.
- Steiner, Roy: An Evaluation of Air-Borne Radar as a Means of Avoiding Atmospheric Turbulence. RM L8101, Nov. 1948.
- Walker, Walter G. and Hadlock, Ivan K.:
 An Analysis of the Airspeeds and
 Normal Accelerations of Boeing B-247
 and B-247D Airplanes in Commercial
 Transport Operation. TN 1783, Dec.
 1948.

- Gust Loads Wings (Cont.)
- Reisert, Thomas D.: Gust-Tunnel Investigation of a Wing Model with Semichord Line Swept Back 30°. TN 1794, Jan. 1949.
- Press, H. and Thompson, J. K.: An Analysis of the Relation Between Horizontal Temperature Variations and Maximum Effective Gust Velocities in Thunderstorms. TN 1917, July 1949.
- Binckley, E. T. and Funk, Jack: A Flight Investigation of the Effects of Compressibility on Applied Gust Loads. TN 1937, Aug. 1949.

TAIL LOADS

(1.9.2)

- Zahm, A. F. and Crook, L. H.: Airplane Stress Analysis. Rept. 82, 1920.
- Norton, F. H. and Bacon, D. L.: The Pressure Distribution over the Horizontal Tail Surfaces of an Airplane -II. Rept. 119, 1921.
- Munk, Max A.: The Tail Plane. Rept. 133, 1922.
- Hoff, Wilhelm: Analysis of Stresses in German Airplanes. Rept. 143, 1922.
- Norton, F. H. and Brown, W. G.: The Pressure Distribution over the Horizontal Tail Surfaces of an Airplane, III. Rept. 148, 1922.
- Hamburger, H.: Practical Method for Balancing Airplane Moments. TN 179, Feb. 1924.
- Montieth, Charles N.: Slip Stream Effect. TM 355, March 1926.
- From D.V.L. Building Specifications for Airplanes: Load Assumptions for Calculating the Strength of Airplanes. TM 581, Sept. 1930.
- Ferrari, C.: Some Experiments on the Slipstream Effect. TM 820, March 1937.
- Stuper, J.: Effect of Propeller Slipstream of Wing and Tail. TM 874, Aug. 1938.
- Schueller, Carl F.; Korycinski, Peter F. and Strass, H. Kurt: Effect of Elevator-Profile Modifications and Trailing-Edge Strips on Elevator Hinge-Moment and Other Aerodynamic Characteristics of a Full-Scale Horizontal Tail Surface. CB L5F01 (WR L-111), June 1945.

STEADY (1.9.2.1)

- Norton, F. H.: The Pressure Distribution Over the Horizontal Tail Surfaces of an Airplane. Rept. 118, 1921.
- Stelmachowski, Ing.: Loads and Calculations of Army Airplanes. TN 28, Feb. 1921.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Rhode, Richard V.: Pressure Distribution on the Tail Surfaces of a PW-9 Pursuit Airplane in Flight. TN 337, April 1930.
- Pearson, H. A.: Pressure-Distribution Measurements on an 0-2H Airplane in Flight. Rept. 590, 1937.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Goett, Harry J. and Reeder, J. P.: Effects of Elevator Nose Shape, Gap, Balance, and Tabs on the Aerodynamic Characteristics of a Horizontal Tail Surface. Rept. 675, 1939.
- Silverstein, Abe and Katzoff, S.: Aerodynamic Characteristics of Horizontal Tail Surfaces. Rept. 688, 1940.
- Pearson, Henry A.: Derivation of Charts for Determining the Horizontal Tail Load Variation with Any Elevator Motion. Rept. 759, 1943.
- Sweberg, Harold H.: Air-Flow Surveys in the Region of the Tail Surfaces of a Single-Engine Airplane Equipped with Dual-Rotating Propellers. ACR (WR L-424), March 1943.
- Dingeldein, Richard C.: Full-Scale Tunnel Investigation of the Pressure Distribution over the Tail of the P-47B Airplane. ARR 3E25 (WR L-439), May 1943.
- Dingeldein, Richard C.: Full-Scale Tunnel Measurements of the Pressures on the Elevator and Fuselage of the Curtiss XP-55 Airplane. MR (WR L-630), June 1943.
- Sweberg, Harold H. and Dingeldein, Richard C.: Some Effects of Propeller Operation on the Distribution of the Load on the Vertical Tail Surface of a Typical Pursuit Airplane. RB 4C13 (WR L-426), March 1944.

- Johnson, Harold I.: Resume of NACA Stability and Control Tests of the Bell P-63 Series Airplane. MR L4J19 (WR L-601), Dec. 1944.
- Becker, John V. and Cooper, Morton: Structural Hinge-Moment Increments Caused by Hinge-Axis Distortion. TN 1038, April 1946.
- Schueller, Carl F.; Korycinski, Peter F. and Strass, H. Kurt: Tests of a Full-Scale Horizontal Tail Surface in the Langley 16-Foot High-Speed Tunnel. TN 1074, May 1946.
- Sadoff, Melvin and Clousing, Lawrence A.:
 Measurements of the Pressure Distribution on the Horizontal-Tail Surface of a Typical Propeller-Driven Pursuit Airplane in Flight. II The Effect of Angle of Sideslip and Propeller Operation. TN 1202, May 1947.
- Schueller, Carl F.: Pressure-Distribution Measurements on a Full-Scale Horizontal Tail Surface for a Mach Number Range of 0.20 to 0.70. RM L7D08, June 1947.
- Schueller, Carl F.; Hieser, Gerald and Cooper, Morton: Aerodynamic Force Characteristics at High Speeds of a Full-Scale Horizontal Tail Surface Tested in the Langley 16-Foot High-Speed Tunnel. RM L7D08a, June 1947.
- Sadoff, Melvin; Turner, William N. and Clousing, Lawrence A.: Measurements of the Pressure Distribution on the Horizontal-Tail Surface of a Typical Propeller-Driven Pursuit Airplane in Flight. I Effects of Compressibility in Steady Straight and Accelerated Flight. TN 1144, July 1947.
- Garvin, John B.: Flight Measurements of Aerodynamic Loads on the Horizontal Tail Surface of a Fighter-Type Airplane. TN 1483, Nov. 1947.
- Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.
- Aiken, William S., Jr.: Flight Determination of Wing and Tail Loads on a Fighter-Type Airplane by Means of Strain-Gage Measurements. TN 1729, Oct. 1948.
- Mirels, Harold: Theoretical Method for Solution of Aerodynamic Forces on Thin Wings in Nonuniform Supersonic Stream with an Application to Tail Surfaces. TN 1736, Nov. 1948.

MANEUVERING (1.9.2.2)

- Norton, F. H. and Allen, E. T.: Accelerations in Flight. Rept. 99, 1921.
- Norton, F. H. and Brown, W. G.: The Pressure Distribution over the Horizontal Tail Surfaces of an Airplane -III. Rept. 148, 1922.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Crowley, J. W., Jr.: Pressure Distribution over a Wing and Tail Rib of a VE-7 and of a TS Airplane in Flight. Rept. 257, 1927.
- Rhode, R. V.: The Pressure Distribution over the Horizontal and Vertical Tail Surfaces of the F6C-4 Pursuit Airplane in Violent Maneuvers. Rept. 307, 1929.
- Rhode, Richard V.: The Pressure Distribution over the Wings and Tail Surfaces of a PW-9 Pursuit Airplane in Flight. Rept. 364, 1930.
- Rhode, Richard V.: Pressure Distribution on the Tail Surfaces of a PW-9 Pursuit Airplane in Flight. TN 337, April 1930.
- Pearson, H. A.: Pressure-Distribution Measurements on an 0-2H Airplane in Flight. Rept. 590, 1937.
- Donely, Philip and Pearson, Henry A.: Flight and Wind-Tunnel Tests of an XBM-1 Dive Bomber. TN 644, April 1938.
- Pearson, H. A. and Garvin, J. B.: An Analytical Study of Wing and Tail Loads Associated with an Elevator Deflection. ARR (WR L-443), June 1941.
- Langley Memorial Aeronautical Laboratory: British Drawing of "G" Restrictors and Control Booster. CB, Oct. 1942.
- Pearson, Henry A.: Derivation of Charts for Determining the Horizontal Tail Load Variation with Any Elevator Motion. Rept. 759, 1943.
- Flight Research Maneuvers Section:
 Flight Studies of the Horizontal-Tail
 Loads Experienced by a Modern
 Fighter Airplane in Abrupt Maneuvers.
 Rept. 792, 1944.
- Clousing, Lawrence A. and Turner,
 William N.: Flight Measurements of
 Horizontal Tail Loads on a Typical
 Propeller-Driven Pursuit Airplane
 During Stalled Pull-Outs at High Speed.
 RMR (WR A-81), May 1944.

- Waneuvering Tail Loads (Cont.)
- Gilruth, Robert R.: Analysis of Vertical-Tail Loads in Rolling Pull-Out Maneuvers. CB L4H14 (WR L-181), Aug. 1944.
- Rhode, Richard V.: Correlation of Flight Data on Limit Pressure Coefficients and Their Relation to High-Speed Burbling and Critical Tail Loads. ACR L4127 (WR L-269), Sept. 1944.
- Johnson, Harold I.: Resume of NACA Stability and Control Tests of the Bell P-63 Series Airplane. MR L4J19 (WR L-601), Oct. 1944.
- Johnson, Harold I.: Estimates of the Vertical-Tail Loads of a Bell P-63A-1 Airplane (AAF No. 42-68889) in Accelerated Rolling Maneuvers Based on Flight Tests with Two Vertical-Tail Arrangements. MR L4K30a (WR L-600), Nov. 1944.
- Matheny, Cloyce E.: Comparison Between Calculated and Measured Loads on Wing and Horizontal Tail in Pull-Up Maneuvers. ARR L5H11 (WR L-193), Oct. 1945.
- Boshar, John and Davis, Philip: Consideration of Dynamic Loads on the Vertical Tail by the Theory of Flat Yawing Maneuvers. Rept. 838, 1946.
- Phillips, William H.: An Investigation of Additional Requirements for Satisfactory Elevator Control Characteristics. TN 1060, June 1946.
- Bishop, Robert C. and Lomax, Harvard L.:
 A Simplified Method for Determining from Flight Data the Rate of Change of Yawing-Moment Coefficient with Sideslip. TN 1076, June 1946.
- Westfall, John R.: Measurements of Landing-Gear Forces and Horizontal-Tail Loads in Landing Tests of a Large Bomber-Type Airplane. TN 1140, Sept. 1946.
- White, Maurice D.; Lomax, Harvard and Turner, Howard L.: Sideslip Angles and Vertical-Tail Loads in Rolling Pull-Out Maneuvers. TN 1122, April 1947.
- Boshar, John: Flight Investigation on a Fighter-Type Airplane of Factors Which Affect the Loads and Load Distributions on the Vertical Tail Surfaces During Rudder Kicks and Fishtails. TN 1394, Aug. 1947.
- Garvin, John B.: Flight Measurements of Aerodynamic Loads on the Horizontal Tail Surface of a Fighter-Type Airplane. TN 1483, Nov. 1947.

- Turner, Howard L.: A Comparison with Flight Data of Vertical-Tail Loads in Various Maneuvers Estimated from Sideslip Angles and Rudder Deflections. RM A7F25, Dec. 1947.
- Lomax, Harvard: Sideslip Angles and Vertical-Tail Loads Developed by Periodic Control Deflections. TN 1504, Jan. 1948.
- Sadoff, Melvin and Clousing, Lawrence A.:
 Measurements of the Pressure Distribution on the Horizontal-Tail Surfaces of a Typical Propeller-Driven Pursuit Airplane in Flight. III Tail Loads in Pull-Up Push-Down Maneuvers. TN 1539, Feb. 1948.
- Stokke, Allen R. and Aiken, William S., Jr.: Flight Measurements of Buffeting Tail Loads. TN 1719, Oct. 1948.
- Aiken, William S., Jr.: Flight Determination of Wing and Tail Loads on a Fighter-Type Airplane by Means of Strain-Gage Measurements. TN 1729, Oct. 1948.

BUFFETING AND GUST (1.9.2.3)

- Hunsaker, J. C.: Report on Behavior of Aeroplanes in Gusts. Part I - Experimental Analysis of Inherent Longitudinal Stability for a Typical Biplane. Wilson, E. B.: Part II - Theory of an Airplane Encountering Gusts. Rept. 1, 1915.
- Blenk, Hermann; Hertel, Heinrich and Thalau, Karl: The German Investigation of the Accident at Meopham (England). TM 669, April 1932.
- White, James A. and Hood, Manley J.: Wing-Fuselage Interference Tail Buffeting, and Air Flow About the Tail of a Low-Wing Monoplane. Rept. 482, 1934.
- Pearson, Henry Adolph: Acceleration, Stress, and Deflection Measurements on the XB-15 Bomber in Gusty Air. MR (WR L-540), June 1939.
- Donely, Philip; Pierce, Harold B. and Pepoon, Philip W.: Measurements and Analysis of the Motion of a Canard Airplane Model in Gusts. TN 758, April 1940.
- Pearson, H. A. and Garvin, J. B.: Tail-Load Measurements on the XB-15 Bomber in Gusty Air. MR (WR L-548), April 1941.
- Abdrashitov, G.: Tail Buffeting: TM 1041, Feb. 1943.

- Buffeting and Gust Tail Loads (Cont.)
- NACA Flight Research Maneuvers Section: Flight Studies of the Horizontal-Tail Loads Experienced by a Modern Fighter Airplane in Abrupt Maneuvers. Rept. 792, 1944.
- Bartlett, Walter A., Jr. and Marino, Alfred A.: An Investigation of the Mutual Interference Effects of a Tail-Surface Stern Propeller Installation on a Model Simulating the Douglas XB-42 Empennage. MR L4K09 (WR L-625), Nov. 1944.
- Boshar, John: Some Flight Measurements of Pressure Distribution During Tail Buffeting. MR L5J06 (WR L-656), Oct. 1945.
- Putnam, Abbott A.: An Improved Method for Calculating the Dynamic Response of Flexible Airplanes to Gusts. TN 1321, May 1947.
- Greenberg, J. Mayo: Some Considerations on an Airfoil in an Oscillating Stream. TN 1372, Aug. 1947.
- Stokke, Allen R. and Aiken, William S., Jr.: Flight Measurements of Buffeting Tail Loads. TN 1719, Oct. 1948.

FUSELAGE, NACELLES AND CANOPIES

(1.9.3)

- Zahm, A. F. and Crook, L. H.: Airplane Stress Analysis. Rept. 82, 1920.
- Stelmachowski, Ing.: Loads and Calculations of Army Airplanes. TN 28, Feb. 1921.
- Aeronautics Staff, Construction Department, Navy Yard, Washington, D. C.:
 Hydrostatic Test of an Airship Model.
 TN 87, March 1922.
- Communication from Rijks-Studiedienst voor de Luchtvaart, of Amsterdam: Distribution of Pressure on Fuselage of Airplane Model. TM 81, April 1922.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Tuckerman, L. B.: Water Model Tests for Semirigid Airships. Rept. 211, 1925.
- Ames, Joseph S.: A Résumé of the Advances in Theoretical Aeronautics Made by Max M. Munk. Rept. 213, 1925.

- Carroll, Thomas and McAvoy, William H.: The Variation in Pressures in the Cockpit of an Airplane in Flight. TN 300, Nov. 1928.
- Zahm, A. F.: Flow and Force Equations for a Body Revolving in a Fluid. Rept. 323, 1929.
- Burgess, C. P.: Flight Tests on U.S.S.

 "Los Angeles". Part II Stress and
 Strength Determination. Rept. 325,
 1929.
- From D. V. L. Building Specifications for Airplanes: Load Assumptions for Calculating the Strength of Airplanes. TM 581, Sept. 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: Pressure Distribution over the Fuselage of a PW-9 Pursuit Airplane in Flight. Rept. 380, 1931.
- Gough, Melvin N.: The Variation in Pressure in the Cabin of an Airplane in Flight. TN 368, March 1931.
- Freeman, Hugh B.: Force Measurements on a 1/40-Scale Model of the U.S. Airship "Akron." Rept. 432, 1932.
- Scudder, N. F.: The Forces and Moments Acting on Parts of the XN2Y-1 Airplane During Spins. Rept. 559, 1936.
- Donely, Philip: The Forces and Moments on Airplane Engine Mounts. TN 587, Dec. 1936.
- Draley, Eugene C.: High-Speed Drag Tests of Several Fuselage Shapes in Combination with a Wing. ACR (WR L-542), Aug. 1940.
- Becker, John V. and Baals, Donald D.: Wind Tunnel Tests of a Submerged-Engine Fuselage Design. ACR (WR L-485), Oct. 1940.
- Delano, James B. and Wright, Ray H.:
 Pressure Distribution About the Cockpit Canopy of a 1/6-Scale Model P-40D
 Airplane at High Speeds. MR, Aug.
 1941.
- Delano, James B. and Wright, Ray H.: Investigation of Drag and Pressure Distribution of Windshields at High Speeds. ARR (WR L-462), Jan. 1942.
- Klemperer, W. B.: Investigation of the Forces Acting on Gliders in Automobile-, Pulley-, Winch-, and Airplane-Towed Flight. TN 844, March 1942.
- Becker, John V.: High-Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.

- Fuselage, Nacelles and Canopies (Cont.)
- Becker, John V. and Baals, Donald D.: High-Speed Tests of a Ducted Body with Various Air-Outlet Openings. ACR (WR L-486), May 1942.
- Fedziuk, Henry A.: High-Speed Wind-Tunnel Tests of Gun Openings in the Nose of the Fuselage of a 1/4-Scale Model. ACR (WR L-502), July 1942.
- Mattson, Axel T.: Tests of a Large Spherical Turret and a Modified Turret on a Typical Bomber Fuselage. ARR (WR L-463), Oct. 1942.
- Multhopp, H.: Aerodynamics of the Fuselage. TM 1036, Dec. 1942.
- Delano, James B.: Pressure Distribution on the Fuselage of a Midwing Airplane Model at High Speeds. TN 890, Feb. 1943.
- Dingeldein, Richard C.: Full-Scale Tunnel Measurements of the Pressures on the Elevator and Fuselage of the Curtiss XP-55 Airplane. MR (WR L-630), June 1943.
- Wright, Ray H.: Estimation of Pressures on Cockpit Canopies, Gun Turrets, Blisters, and Similar Protuberances. ACR L4E10 (WR L-201), May 1944.
- Habel, Louis W. and Korycinski, Peter F.: A Comparison of Three Spinner-Diffuser Designs in an NACA DS Cowling for the Pratt & Whitney R-2800 Engine. MR (WR L-579), June 1944.
- Ritchie, Virgil S. and Daniels, Everett J.: Estimation of Pressure Distributions at Subcritical Speeds for Turrets Located on a Wing. ACR L4G28 (WR L-117), July 1944.
- DeKoster, Lucas J.: Wind-Tunnel Tests of the Gorgon IIA and IIB Airframes. I - Surface Pressure Distribution and Duct Tests. TED No. NACA 2328. MR L4J06, Oct. 1944.
- Rickey, Edward A. and LaHatte, James A., Jr.: An Investigation of the Cowling and the Canopy of the Bell XP-77 Airplane in the Langley Full-Scale Tunnel. MR L4K18, Nov. 1944.
- Mattson, Axel T. and Loving, Donald L.:
 Compressibility Investigation of a
 0.14-Scale Model of the Bell XP-83
 Airplane in the Langley 8-Foot HighSpeed Tunnel. MR L5J30, Nov. 1945.
- Jessen, Henry, Jr. and Stephenson, Jack D.: High-Speed Wind-Tunnel Tests of a Model of the Consolidated Vultee XP081 Airplane. - Power Off. MR A6E29, Aug. 1946.

- Danforth, Edward C. B., III and Reeder, John P.: Flight Measurements of Internal Cockpit Pressures in Several Fighter-Type Airplanes. TN 1173, Feb. 1947.
- Cocke, Bennie W., Jr. and Czarnecki, K. R.: Canopy Loads Investigation for the F6F-3 Airplane. RM L6L23a, April 1947.
- Sandahl, Carl A. and Vollo, Samuel D.: Wind-Tunnel Investigation of the Air Load Distribution on Two Combinations of Lifting Surface and Fuselage. TN 1295, May 1947.
- Dexter, Howard E. and Rickey, Edward A.: Investigation of the Loads on a Conventional Front and Rear Sliding Canopy. RM L7D04, July 1947.
- Cocke, Bennie W., Jr.: Investigation of the Loads on a Typical Bubble-Type Canopy. RM L7D07, July 1947.
- Kurzweg, Hermann: Fundamental Aerodynamic Investigations for Development of Arrow-Stabilized Projectiles. TM 1175, Dec. 1947.
- Nichols, Mark R. and Keith, Arvid L., Jr.: Investigation of a Systematic Group of NACA 1-Series Cowlings with and Without Spinners. RM L8A15, May 1948.
- Maslen, Stephen H.: Method for Calculation of Pressure Distributions on Thin Conical Bodies of Arbitrary Cross Section in Supersonic Stream. TN 1659, July 1948.
- Spreiter, John R.: Aerodynamic Properties of Slender Wing-Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1662, July 1948.
- Matheny, Cloyce E. and Huston, Wilber B.: Flight Investigation of Loads on a Bubble-Type Canopy. RM L8C30, Oct. 1948.
- Aiken, William S., Jr.: Flight Determination of Wing and Tail Loads on a Fighter-Type Airplane by Means of Strain-Gage Measurements. TN 1729, Oct. 1948.
- Thompson, Jim Rogers: A Rapid Graphical Method for Computing the Pressure Distribution at Supersonic Speeds on a Slender Arbitrary Body of Revolution. TN 1768, Jan. 1949.
- Spreiter, John R.: Aerodynamic Properties of Cruciform-Wing and Body Combinations at Subsonic, Transonic, and Supersonic Speeds. TN 1897, June 1949.

ROTATING WINGS

(1.9.4)

- Wheatley, John B.: Wing Pressure Distribution and Rotor-Blade Motion of an Autogiro as Determined in Flight. Rept. 475, 1933.
- Wheatley, John B.: The Influence of Wing Setting on the Wing Load and Rotor Speed of a PCA-2 Autogiro as Determined in Flight. Rept. 523, 1935.
- Myers, Garry C., Jr.: Flight Measurements of Helicopter Blade Motion with a Comparison Between Theoretical and Experimental Results. TN 1266, April 1947.
- Gustafson, F. B. and Gessow, Alfred: Effect of Blade Stalling on the Efficiency of a Helicopter Rotor as Measured in Flight. TN 1250, April 1947.

AEROELASTICITY

(1.9.5)

- Lovell, Powell M., Jr.: The Effect of Wing Bending Deflection on the Rolling Moment Due to Sideslip. TN 1541, Feb. 1948.
- Phillips, William H.: Appreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.

- Diederich, Franklin W. and Budiansky, Bernard: Divergence of Swept Wings. TN 1680, Aug. 1948.
- Cooney, T. V. and Wollner, Bertram C.:
 A Comparison of Flight Measurements
 with Calculations of the Loss in Rolling
 Effectiveness Due to Wing Twist. RM
 L8F07, Aug. 1948.
- Diederich, Franklin W.: Calculation of the Effects of Structural Flexibility on Lateral Control of Wings of Arbitrary Plan Form and Stiffness. RM L8H24a, Dec. 1948.
- Tucker, Warren A. and Nelson, Robert L.: The Flexible Rectangular Wing in Roll at Supersonic Flight Speeds. TN 1769, Dec. 1948.
- Frick, Charles W. and Chubb, Robert S.: The Longitudinal Stability of Elastic Swept Wings at Supersonic Speed. TN 1811, Feb. 1949.
- Diederich, Franklin W.: Calculation of the Aerodynamic Loading of Flexible Wings of Arbitrary Plan Form and Stiffness. TN 1876, April 1949.
- Tucker, Warren A. and Nelson, Robert L.:
 The Effect of Torsional Flexibility on
 the Rolling Characteristics at Supersonic Speeds of Tapered Unswept
 Wings. TN 1890, June 1949.

Vibration and Flutter (1.10)

- Elsasser, R.: Measuring Vibration and Torque with the Oscillograph. TM 291, Dec. 1924.
- London, Albert: Principles, Practice, and Progress of Noise Reduction in Airplanes. TN 748, Jan. 1940.
- Kussner, H. G. and Schwarz, L.: The Oscillating Wing with Aerodynamically Balanced Elevator. TM 991, Oct. 1941.
- Theodorsen, Theodore and Garrick, I. E.: Flutter Calculations in Three Degrees of Freedom. Rept. 741, 1942.
- Theodorsen, Theodore and Regier, Arthur A.: Vibration-Response Tests of a 1/5-Scale Model of the Grumman F6F Airplane in the Langley 16-Foot High-Speed Tunnel. MR L4K18a (WR L-743), Nov. 1944.
- Mendelson, Alexander: Effect of Aerodynamic Hysteresis on Critical Flutter Speed at Stall. RM E8B04, June 1948.
- Mendelson, Alexander: Effect of Centrifugal Force on Critical Flutter Speed on a Uniform Cantilever Beam. RM E8B05, June 1948.
- Diederich, Franklin W. and Budiansky, Bernard: Divergence of Swept Wings. TN 1680, Aug. 1948.
- Evvard, John C.: A Linearized Solution for Time-Dependent Velocity Potentials Near Three-Dimensional Wings at Supersonic Speeds. TN 1699, Sept. 1948.
- Phillips, William H.: Theoretical Analysis of Oscillations of a Towed Cable. TN 1796, Jan. 1949.
- Benscoter, Stanley U. and Gossard, Myron L.: Matrix Methods for Calculating Cantilever-Beam Deflections. TN 1827, March 1949.
- Hönl, H.: Two-Dimensional Wing Theory in the Supersonic Range. TM 1238, June 1949.
- Watkins, Charles E.: Effect of Aspect Ratio on Undamped Torsional Oscillations of a Thin Rectangular Wing in Supersonic Flow. TN 1895, June 1949.

WINGS AND AILERONS

(1.10.1)

- Von Baumhauer, A. C. and Koning, C.: On the Stability of Oscillations of an Airplane Wing. TM 223, Aug. 1923.
- Toussaint, Kerneis and Girault: Experimental Investigation of the Effect of an Oscillating Airstream (Katzmayr Effect) on the Characteristics of Airfoils. TN 202, Sept. 1924.
- Sabatier, J.: Researches on Ailerons and Especially on the Test Loads to Which They Should Be Subjected. TM 398, Feb. 1927.
- Reid, Elliott G.: Airfoil Lift with Changing Angle of Attack. TN 266, Sept. 1927.
- Zahm, A. F. and Bear, R. M.: A Study of Wing Flutter. Vibration of M0-1 Tailplane and Other Airfoils. Rept. 285, 1928.
- Theodorsen, T. and Gelalles, A. G.: Vibration Response of Airplane Structures. Rept. 491, 1934.
- Garrick, I. E.: Propulsion of a Flapping and Oscillating Airfoil. Rept. 567, 1936.
- Küssner, H. G.: Status of Wing Flutter. TM 782, Jan. 1936.
- Von Schlippe, B.: The Question of Spontaneous Wing Oscillations. TM 806, Oct. 1936.
- Garrick, I. E.: On Some Reciprocal Relations in the Theory of Nonstationary Flows. Rept. 629, 1938.
- Voigt, H.: Wind-Tunnel Investigations on Flexural-Torsional Wing Flutter. TM 877, Sept. 1938.
- Silverstein, Abe and Joyner, Upshur T.: Experimental Verification of the Theory of Oscillating Airfoils. Rept. 673, 1939.
- Cicala, P.: Comparison of Theory with Experiment in the Phenomenon of Wing Flutter. TM 887, Feb. 1939.
- Coleman, Robert P.: The Frequency of Torsional Vibration of a Tapered Beam. TN 697, March 1939.

- Wings and Ailerons (Cont.)
- Theodorsen, Theodore: General Theory of Aerodynamic Instability and the Mechanism of Flutter. Rept. 496, 1940.
- Theodorsen, Theodore and Garrick, I. E.: Mechanism of Flutter. A Theoretical and Experimental Investigation of the Flutter Problem. Rept. 685, 1940.
- Burgess, C. P.: The Frequencies of Cantilever Wings in Beam and Torsional Vibrations. TN 746, Jan. 1940.
- Theodorsen, Theodore and Garrick, I. E.: Nonstationary Flow About a Wing-Aileron-Tab Combination Including Aerodynamic Balance. Rept. 736, 1942.
- Theodorsen, Theodore: Miscellaneous Tests in Vacuum Sphere on Structural Damping of Airplane Wing Panels. RB, Oct. 1942.
- Theodorsen, Theodore; Coleman, R. P. and Smith, N. H.: Flutter Tests on SB2U Model in 16-Foot Tunnel. MR (WR L-657), Feb. 1943.
- Theodorsen, Theodore; Coleman, R. P. and Smith, N. H.: Flutter Tests of Modified SB2U Model in 16-Foot Tunnel. MR (WR L-742), Aug. 1943.
- Pinkel, I. Irving: A Comparative Study of the Effect of Wing Flutter Shape on the Critical Flutter Speed. ARR 3K15 (WR L-413), Nov. 1943.
- Garrick, I. E.: Bending-Torsion Flutter Calculations Modified by Subsonic Compressibility Corrections. Rept. 836, 1946.
- Garrick, I. E. and Rubinow, S. I.: Flutter and Oscillating Air-Force Calculations for an Airfoil in a Two-Dimensional Supersonic Flow. Rept. 846, 1946.
- Ashkenas, I. L.: The Development of a Lateral-Control System for Use with Large-Span Flaps. TN 1015, Jan. 1946.
- Spreiter, John R. and Galster, George M.:
 Observations of Aileron Flutter on the
 Bell P-63A-6 Airplane in Flight at High
 Mach Numbers. ACR A6B08, April
 1946.
- Schade, Th. and Krienes, K.: The Oscillating Circular Airfoil on the Basis of Potential Theory. TM 1098, Feb. 1947.
- Reissner, Eric: The Effect of Finite Span on the Airload Distributions for Oscillating Wings. I - Aerodynamic Theory of the Oscillating Wing of Finite Span. TN 1194, March 1947.

- Nekrasov, A. I.: Theory of Wings in Nonstationary Flow. TM 1154, June 1947.
- Garrick, I. E. and Rubinow, S. I.: Theoretical Study of Air Forces on an Oscillating or Steady Thin Wing in a Supersonic Main Stream. TN 1383, July 1947.
- Reissner, Eric and Stevens, John E.: Effect of Finite Span on the Airload Distributions for Oscillating Wings. II Methods of Calculation and Examples of Application. TN 1195, Oct. 1947.
- Runyan, Harry L. and Sewall, John L.:
 Experimental Investigation of the
 Effects of Concentrated Weights on
 Flutter Characteristics of a Straight
 Cantilever Wing. TN 1594, June 1948.
- Anderson, Roger A. and Houbolt, John C.:
 Determination of Coupled and Uncoupled
 Modes and Frequencies of Natural Vibration of Swept and Unswept Wings
 from Uniform Cantilever Modes. TN
 1747, Nov. 1948.
- Runyan, Harry L. and Watkins, Charles E.: Flutter of a Uniform Wing with an Arbitrarily Placed Mass According to a Differential-Equation Analysis and a Comparison with Experiment. TN 1848, March 1949.
- Woolston, Donald S. and Runyan, Harry L.:
 Appraisal of Method of Flutter Analysis Based on Chosen Modes by Comparison with Experiment for Cases of Large Mass Coupling. TN 1902, June 1949.
- Sewall, John L. and Woolston, Donald S.:
 Preliminary Experimental Investigation of Effects of Aerodynamic Shape of Concentrated Weights on Flutter of a Straight Cantilever Wing. RM L9E17, July 1949.

TAILS

(1.10.2)

- From "Zeitschrift fur Flugtechnik und Motorluftschiffahrt," July 14, 1926: Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt," June 17, 1926, in Dusseldorf, Germany. TM 379, Sept. 1926.
- Zahm, A. F. and Bear, R. M.: A Study of Wing Flutter. Vibration of M0-1 Tailplane and Other Airfoils. Rept. 285, 1928.
- Biechteler, Curt: Tests for the Elimination of Tail Flutter. TM 710, June 1933.

Tails (Cont.)

- Theodorsen, T. and Gelalles, A. G.: Vibration Response of Airplane Structures. Rept. 491, 1934.
- Abdrashitov, G.: Tail Buffeting. TM 1041, Feb. 1943.
- Nielsen, Jack N. and Sweberg, Harold H.: Note on Compressibility Effects on Downwash at the Tail at Subcritical Speeds. CB L5C09 (WR L-19), March 1945.
- Smith, N. H.; Clevenson, S. A. and Barmby, J. G.: Experimental Investigation of a Preloaded Spring-Tab Flutter Model. RM L7G18, Dec. 1947.

ELEVATORS AND RUDDERS (1.10.2.1)

- Theodorsen, Theodore and Regier, Arthur A.: Vibration Surveys of the P-47-B Rudder and Fin-Rudder Assembly. MR (WR L-653), April 1943.
- Theodorsen, Theodore: Preliminary Vibration and Flutter Studies on P-47 Tail. MR (WR L-654), Aug. 1943.
- Theodorsen, Theodore and Smith, N. H.: Flutter Tests of B-34 Fin-Rudder-Tab System. MR (WR L-679), Sept. 1944.

TABS (1.10.2.2)

Smith, N. H.; Clevenson, S. A. and Barmby, J. G.: Experimental Investigation of a Preloaded Spring-Tab Flutter Model. RM L7G18, Dec. 1947.

BODIES

(1.10.3)

- Lagarde, C. Martinot: Vibrations of Aviation Engines. TM 56, Jan. 1922.
- Kutzbach, K.: The Flexible Mounting of an Airplane Engine. TN 148, July 1923.
- Theodorsen, T. and Gelalles, A. G.: Vibration Response of Airplane Structures. Rept. 491, 1934.
- Matthews, Howard F.: Elimination of Rumble from the Cooling Ducts of a Single-Engine Pursuit Airplane. RMR (WR A-70), Aug. 1943.
- Theodorsen, Theodore and Regier, Arthur A.: Vibration-Response Tests of a 1/5-Scale Model of the Grumman F6F Airplane in the Langley 16-Foot High-Speed Tunnel. MR L4K18a (WR L-743), Nov. 1944.

- Runyan, Harry L. and Sewall, John L.: Experimental Investigation of the Effects of Concentrated Weights on Flutter Characteristics of a Straight Cantilever Wing. TN 1594, June 1948.
- Runyan, Harry L. and Watkins, Charles E.: Flutter of a Uniform Wing with an Arbitrarily Placed Mass According to a Differential-Equation Analysis and a Comparison with Experiment. TN 1848, March 1949.
- Woolston, Donald S. and Runyan, Harry L.:
 Appraisal of Method of Flutter Analysis Based on Chosen Modes by Comparison with Experiment for Cases of Large Mass Coupling. TN 1902, June 1949.
- Sewall, John L. and Woolston, Donald S.:
 Preliminary Experimental Investigation of Effects of Aerodynamic Shape of Concentrated Weights on Flutter of a Straight Cantilever Wing. RM L9E17, July 1949.

PROPELLERS, FANS, AND COMPRESSORS

(1.10.4)

- De Bothezat, George: The General Theory of Blade Screws. Rept. 29, 1919.
- Lagarde, C. Martinot: Vibrations of Aviation Engines. TM 56, Jan. 1922.
- Scheubel, F. N.: Fluttering of the Tail Surfaces of an Airplane and the Means for Its Prevention. TM 498, Jan. 1929.
- Liebers, F.: Contribution to the Theory of Propeller Vibrations. TM 568, June 1930.
- Seewald, Friedrich: Flutter in Propeller Blades. TM 642, Oct. 1931.
- Liebers, Fritz: Resonance Vibrations of Aircraft Propellers. TM 657, Feb. 1932.
- Liebers, Fritz: Propeller Tip Flutter. TM 683, Sept. 1932.
- Theodorsen, T.: Propeller Vibrations and the Effect of the Centrifugal Force. TN 516, Feb. 1935.
- Liebers, F.: Analysis of the Three Lowest Bending Frequencies of a Rotating Propeller. TM 783, Jan. 1936.
- Hood, Manley J. and Gaydos, M. Edward: Effects of Propellers and of Vibration on the Extent of Laminar Flow on the NACA 27-212 Airfoil. ACR (WR L-784), Oct. 1939.

- Propellers, Fans, and Compressors (Cont.)
- Lesley, E. P.: Tandem Air Propellers II. TN 822, Aug. 1941.
- Cordes, G.: The Design of Propeller Blade Roots. TM 1001, Jan. 1942.
- Meyer, J.: Propeller Blade Stresses Caused by Periodic Displacement of the Propeller Shaft. TM 1016, June 1942.
- Stieglitz, Albert: Control of Torsional Vibrations by Pendulum Masses. TM 1035, Nov. 1942.
- Miller, Mason F.: Wind-Tunnel Vibration Tests of a Four-Blade Single-Rotating Pusher Propeller. ARR 3F24 (WR L-327), June 1943.
- Miller, Mason F.: Wind-Tunnel Vibration Tests of Dual-Rotating Propellers. ARR 3111 (WR L-405), Sept. 1943.
- Meyer, J.: The Coupling of Flexural Propeller Vibrations with the Torsional Crankshaft Vibrations. TM 1051, Dec. 1943.
- Corson, Blake W., Jr. and Miller, Mason F.: Considerations of Wake-Excited Vibratory Stress in a Pusher Propeller. ACR L4B28 (WR L-146), Feb. 1944.
- Theodorsen, Theodore and Regier, Arthur A.: Effect of the Lift Coefficient on Propeller Flutter. ACR L5F30 (WR L-161), July 1945.
- Bock, G.: Airscrew Gyroscopic Moments. TM 1099, Sept. 1946.
- Simkinson, Scott H.; Eatherton, Laurel J. and Millenson, Morton B.: Effect of Centrifugal Force on the Elastic Curve of a Vibrating Cantilever Beam. TN 1204, Feb. 1947.
- Regier, Arthur A.; Barmby, John G. and Hubbard, Harvey H.: Effect of Critical Mach Number and Flutter on Maximum Power Loading of Ducted Fans. TN 1330, June 1947.
- Regier, Arthur A. and Hubbard, Harvey H.: Factors Affecting the Design of Quiet Propellers. RM L7H05, Sept. 1947.
- Hubbard, Harvey H.: Sound from Dual-Rotating and Multiple Single-Rotating Propellers. TN 1654, July 1948.

- Vogeley, A. W.: Calculation of the Effect of Thrust-Axis Inclination on Propeller Disk Loading and Comparison with Flight Measurements. TN 1721, Oct. 1948.
- Mendelson, Alexander: Effect of Centrifugal Force on Flutter of Uniform Cantilever Beam at Subsonic Speeds with Application to Compressor and Turbine Blades. TN 1893, June 1949.

ROTATING WING AIRCRAFT

(1.10.5)

- Bailey, F. J., Jr.: Flight Investigation of Control-Stick Vibration of the YG-1B Autogiro. TN 764, June 1940.
- Coleman, Robert P.: Theory of Self-Excited Mechanical Oscillations of Hinged Rotor Blades. ARR 3G29 (WR L-308), July 1943.
- Feingold, Arnold M.: Theory of Mechanical Oscillations of Rotors with Two Hinged Blades. ARR 3I13 (WR L-312), Sept. 1943.
- Coleman, Robert P.: A Preliminary
 Theoretical Study of Helicopter-Blade
 Flutter Involving Dependence Upon
 Coning Angle and Pitch Setting. MR
 L6G12 (WR L-692), June 1946.
- Coleman, Robert P. and Feingold, Arnold M.: Theory of Ground Vibrations of a Two-Blade Helicopter Rotor on Anisotropic Flexible Supports. TN 1184, Jan. 1947.
- Simpkinson, Scott H.; Eatherton, Laurel J. and Millenson, Morton B.: Effect of Centrifugal Force on the Elastic Curve of a Vibrating Cantilever Beam. TN 1204, Feb. 1947.
- Coleman, Robert P. and Stempin, Carl W.:
 A Preliminary Theoretical Study of
 Aerodynamic Instability of a TwoBlade Helicopter Rotor. RM L6H23,
 March 1947.
- Gustafson, F. B. and Gessow, Alfred: Effect of Blade Stalling on the Efficiency of a Helicopter Rotor as Measured in Flight. TN 1250, April 1947.
- Myers, Garry C., Jr.: Flight Measurements of Helicopter Blade Motion with a Comparison Between Theoretical and Experimental Results. TN 1266, April 1947.

Parachutes

(1.11)

Scher, Stanley H. and Gale, Lawrence J.:
Wind-Tunnel Investigation of the Opening Characteristics, Drag, and Stability of Several Hemispherical Parachutes. TN 1869, April 1949.

HYDRODYNAMICS
(2)

Theory (2.1)

- Diehl, W. S.: Static Stability of Seaplane Floats and Hulls. TN 183, March 1924.
- Gebers, Friedrich: Law of Similitude for the Surface Resistance of Lacquered Planes Moving in a Straight Line Through Water. TM 308, April 1925.
- Herrmann, H.: Seaplane Floats and Hulls - I. TM 426, Aug. 1927.
- Herrmann, H.: Seaplane Floats and Hulls II. TM 427, Sept. 1927.
- Pabst, Wilhelm: Theory of the Landing Impact of Seaplanes. TM 580, Aug. 1930.
- Schröder, P.: Determination of Resistance and Trimming Moment of Planing Water Craft. TM 619, May 1931.
- Schröder, Paul: The Take-Off of Seaplanes, Based on a New Hydrodynamic Reduction Theory. TM 621, May 1931.
- Seewald, Friedrich: On Floats and Float Tests. TM 639, Sept. 1931.
- Diehl, Walter S.: The Estimation of Maximum Load Capacity of Seaplanes and Flying Boats. Rept. 453, 1932.
- Sottorf, W.: Experiments with Planing Surfaces. TM 661, March 1932.
- Schroder, P.: Towing Tests of Models as an Aid in the Design of Seaplanes. TM 676, July 1932.
- Sottorf, W.: Scale Effect of Model in Seaplane-Float Investigation. TM 704, April 1933.
- Shoemaker, James M. and Dawson, John R.: The Effect of Trim Angle on the Take-off Performance of a Flying Boat. TN 486, Jan. 1934.
- Gruson, M. F.: Similitude in Hydrodynamic Tests Involving Planing. TM 795, May 1936.
- Weinig, F.: Impact of a Vee-Type Seaplane on Water with Reference to Elasticity. TM 810, Nov. 1936.
- Mewes, E.: The Impact on Floats or Hulls During Landing as Affected by Bottom Width. TM 811, Nov. 1936.

- Schmidt, Rudolph: The Scale Effect in Towing Tests with Airplane Float Systems. TM 826, May 1937.
- Diehl, Walter S.: A Discussion of Certain Problems Connected with the Design of Hulls of Flying Boats and the Use of General Test Data. Rept. 625, 1938.
- Weinig, F.: On the Theory of Hydrofoils and Planing Surfaces. TM 845, Jan. 1938.
- Sambraus, A.: Planing-Surface Tests at Large Froude Numbers - Airfoil Comparison. TM 848, Feb. 1938.
- Diehl, Walter S.: A Study of Flying-Boat Take-Off. TN 643, April 1938.
- Sottorf, W.: The Design of Floats. TM 860, April 1938.
- Perelmuter, A.: On the Determination of the Take-Off Characteristics of a Seaplane. TM 863, May 1938.
- Diehl, Walter S.: The Application of Basic Data on Planing Surfaces to the Design of Flying-Boat Hulls. Rept. 694, 1940.
- Ward, Kenneth E.: A New Method of Studying the Flow of the Water Along the Bottom of a Model of a Flying-Boat Hull. TN 749, Feb. 1940.
- Sedov, L.: On the Theory of Unsteady Planing and the Motion of a Wing with Vortex Separation. TM 942, May 1940.
- Sottorf, W.: New Method of Extrapolation of the Resistance of a Model Planing Boat to Full Size. TM 1007, March 1942.
- Truscott, Starr and Dawson, John R.: A
 Comparison of the Results from General Tank Tests of 1/6- and 1/12-FullSize Models of the British Singapore
 IIC Flying Boat. TN 858, Aug. 1942.
- Benson, James M. and Lina, Lindsay J.: The Effect of Dead Rise upon the Low-Angle Type of Porpoising. ARR (WR L-610), Oct. 1942.

- Davidson, Kenneth S. M.; Locke, F. W. S., Jr. and Suarez, Anthony: Porpoising: A Comparison of Theory with Experiment. ARR 3G07 (WR W-65), July 1943.
- Benson, James M. and Freihofner, Anton: Methods and Charts for Computing Stability Derivatives of a V-Bottom Planing Surface, ARR 3L08 (WR L-349), Dec. 1943.
- Walchner, O.: Profile Measurements During Cavitation. TM 1060, Jan. 1944.
- Locke, F. W. S., Jr.: General Resistance Tests on Flying-Boat Hull Models. ARR 4B19 (WR W-70), Feb. 1944.
- Sottorf, W.: Analysis of Experimental Investigations of the Planing Process on the Surface of Water. TM 1061, March 1944.
- Locke, F. W. S., Jr.: "General" Main-Spray Tests of Flying-Boat Models in the Displacement Range. ARR 5A02 (WR W-72), April 1945.
- Locke, F. W. S., Jr. and Hugli, W. C., Jr.:
 A Method for Studying the Longitudinal
 Dynamic Stability of Flying-Boat-Hull
 Models at High Planing Speeds and
 During Landing. ARR 4H31 (WR W57), April 1945.
- Ackeret, J.: Experimental and Theoretical Investigations of Cavitation in Water. TM 1078, May 1945.
- Imlay, Frederick H.: Theoretical Motions of Hydrofoil Systems. TN 1285, Jan. 1947.
- Sedov, L.: Scale Effect and Optimum Relations for Sea Surface Planing. TM 1097, Feb. 1947.
- Parkinson, John B.: Appreciation and Determination of the Hydrodynamic Qualities of Seaplanes. TN 1290, May 1947.
- Benscoter, Stanley U.: Impact Theory for Seaplane Landing. TN 1437, Oct. 1947.

- Milwitzky, Benjamin: A Generalized
 Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts. TN 1516, Feb. 1948.
- Wagner, Herbert: Planing of Watercraft. TM 1139, April 1948.
- Milwitzky, Benjamin: A Generalized
 Theoretical Investigation of the Hydrodynamic Pitching Moments Experienced
 by V-Bottom Seaplanes During StepLanding Impacts and Comparisons
 with Experiment. TN 1630, June 1948.
- Steiner, Margaret F.: Analysis of Planing Data for Use in Predicting Hydrodynamic Impact Loads. TN 1694, Aug. 1948.
- Harney, L. A.; Saur, J. F. T., Jr. and Robinson, A. R.: A Statistical Study of Wave Conditions at Four Open-Sea Localities in the North Pacific Ocean. TN 1493, Jan. 1949.
- Edge, Philip M., Jr.: Hydrodynamic Impact Loads in Smooth Water for a Prismatic Float Having an Angle of Dead Rise of 40°. TN 1775, Jan. 1949.
- Steiner, Margaret F.: Comparison of Over-All Impact Loads Obtained During Seaplane Landing Tests with Loads Predicted by Hydrodynamic Theory. TN 1781, Jan. 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part I - Laminar Flows. TM 1217, April 1949.
- Schlichting, H.: Lecture Series "Boundary Layer Theory." Part II - Turbulent Flows. TM 1218, April 1949.
- Haines, Gilbert A.: Comparison of Pitching Moments Obtained During Seaplane Landings with Values Predicted by Hydrodynamic Impact Theory. TN 1881, May 1949.

General Arrangement Studies

(2.2)

- Pegna, G.: High Efficiency of Seaplanes. TM 32, Aug. 1921.
- Royer, Etienne: Commercial Airplanes and Seaplanes. TM 85, April 1922.
- Magaldi, Guilio: Hulls for Large Seaplanes. TM 295, Jan. 1925.
- Rohrbach, Adolf: Recent Experiments with Large Seaplanes. TM 353, March 1926.
- Benoit, Lieutenant: Designing Seaplane Hulls and Floats. TM 376, Aug. 1926.
- Herrmann, H.: Seaplane Floats and Hulls - I. TM 426, Aug. 1927.
- Herrmann, H.: Seaplane Floats and Hulls II. TM 427, Sept. 1927.
- Schnadel, Georg: Relations Between Ship Design and Seaplane Design. TM 645, Nov. 1931.
- Pegna, Giovanni: Some Ideas on Racing Seaplanes. TM 691, Nov. 1932.
- Meyer, L.: Dimensions of Twin Seaplane Floats. TM 719, Aug. 1933.
- Bell, Joe W.: Tank Tests of Two Floats for High-Speed Seaplanes. TN 473, Nov. 1933.
- Parkinson, J. B. and Bell, J. W.: The Calculated Effect of Trailing-Edge Flaps on the Take-Off of Flying Boats. TN 510, Nov. 1934.
- Diehl, Walter S.: A Discussion of Certain Problems Connected with the Design of Hulls of Flying Boats and the Use of General Test Data. Rept. 625, 1938.
- Allison, John M.: Tank Tests of a Model of One Hull of the Savoia S-55-X Flying Boat NACA. TN 635, Feb. 1938.
- Diehl, Walter S.: The Application of Basic Data on Planing Surfaces to the Design of Flying-Boat Hulls. Rept. 694, 1940.
- Olson, R. E. and Allison, J. M.: The Calculated Effect of Various Hydrodynamic and Aerodynamic Factors on the Take-Off of a Large Flying Boat. Rept. 702, 1940.

- Truscott, Starr and Olson, Roland E.: The Longitudinal Stability of Flying Boats as Determined by Tests of Models in the NACA Tank. II Effect of Variations in Form of Hull on Longitudinal Stability. ARR (WR L-468), Nov. 1942.
- Parkinson, John B.; Olson, Roland E.; Draley, Eugene C. and Luoma, Arvo A.: Aerodynamic and Hudrodynamic Tests of a Family of Models of Flying-Boat Hulls Derived from a Streamline Body NACA Model 84 Series. Rept. 766, 1943.
- Locke, Fred W. S., Jr.: A Correlation of the Dimensions Proportions, and Loadings of Existing Seaplane Floats and Flying-Boat Hulls. ARR (WR W-41), March 1943.
- Land, Norman S. and Lina, Lindsay J.:
 Tests of a Dynamic Model in NACA
 Tank No.1 to Determine the Effect
 of Length of Afterbody, Angle of Afterbody Keel, Gross Load, and a
 Pointed Step on Landing and Planing
 Stability. ARR (WR L-400), March
 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Systematic Model Experiments on the Porpoising Characteristics of Flying-Boat Hulls. ARR 3F12 (WR W-67), June 1943.
- Dawson, John R. and Wadlin, Kenneth L.:
 Preliminary Tank Tests with PlaningTail Seaplane Hulls. ARR 3F15 (WR
 L-167), June 1943.
- Davidson, Kenneth S. M.; Locke, F. W. S., Jr. and Suarez, Anthony: Porpoising: A Comparison of Theory with Experiment. ARR 3G07 (WR W-65), July 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Analyses of Systematic Experiments on the Resistance and Porpoising Characteristics of Flying-Boat Hulls. ARR 3I06 (WR W-68), Sept. 1943.
- Benson, James M: and King, Douglas A.: Preliminary Tests to Determine the Dynamic Stability Characteristics of Various Hydrofoil Systems for Seaplanes and Surface Boats. RB 3K02 (WR L-756), Nov. 1943.

- Parkinson, John B.: The Design of the Optimum Hull for a Large Long-Range Flying Boat. ARR L4I12 (WR L-282), Sept. 1944.
- Locke, F. W. S., Jr. and Barklie, Jean A.: Tank Tests of the Resistance and Porpoising Characteristics of Three Flying-Boat Hull Models Equipped with Planing Flaps. ARR 4H30 (W-58), Nov. 1944.
- Locke, F. W. S., Jr.: An Analysis of the Skipping Characteristics of Some Full-Size Flying Boats. ARR 5J24 (WR W-104), Jan. 1946.
- Dawson, John R. and Walter, Robert C.:
 The Effects of Various Parameters on
 the Load at Which Spray Enters the
 Propellers of a Flying Boat. TN 1056,
 May 1946.
- Parkinson, John B.: A Correlation of Loadings and Afterbody Length-Beam Ratios of Various Flying-Boat Hulls. ARR L6E28, June 1946.
- Locke, F. W. S., Jr.: An Analysis of the Main Spray Characteristics of Some Full-Size Multiengine Flying Boats. TN 1091, July 1946.
- Locke, F. W. S., Jr.: A Collection of the Collapsed Results of General Tank Tests of Miscellaneous Flying-Boat-Hull Models. TN 1182, March 1947.
- Benscoter, Stanley U.: Estimate of Hull-Weight Change with Varying Length-Beam Ratio for Flying Boats. RM L7F24, Aug. 1947.
- Locke, F. W. S., Jr.: A Graphical Method for Interpolation of Hydrodynamic Characteristics of Specific Flying Boats from Collapsed Results of General Tests of Flying-Boat-Hull Models. TN 1259, Jan. 1948.
- Milwitzky, Benjamin: A Generalized
 Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts. TN 1516, Feb. 1948.

- Parkinson, John B.: Take-Off Performance of Light Twin-Float Seaplanes. TN 1524, Feb. 1948.
- Carter, Arthur W. and Haar, Marvin I.:
 Hydrodynamic Qualities of a Hypothetical Flying Boat with a Low-Drag
 Hull Having a Length-Beam Ratio of
 15. TN 1570, April 1948.
- Milwitzky, Benjamin: A Generalized
 Theoretical Investigation of the Hydrodynamic Pitching Moments Experienced by V-Bottom Seaplanes During Step-Landing Impacts and Comparisons with Experiment. TN 1630, June 1948.
- Haar, Marvin I.: Tank Tests of a 1/10-Size Model of a Hypothetical Flying Boat with a Hull Length-Beam Ratio of 9.0. TN 1648, July 1948.
- Olson, Roland E. and Land, Norman S.:
 Effect of Afterbody Length and Keel
 Angle on Minimum Depth of Step for
 Landing Stability and on Take-Off
 Stability of a Flying Boat. TN 1571,
 Sept. 1948.
- Hodges, William W. and Woodward, David R.: Spray Characteristics of Four Flying-Boat Hulls as Affected by Length-Beam Ratio. TN 1726, Oct. 1948.
- Carter, Arthur W.: Effect of Hull Length-Beam Ratio on the Hydrodynamic Characteristics of Flying Boats in Waves. TN 1782, Jan. 1949.
- Carter, Arthur W. and Weinstein, Irving:
 Effect of Forebody Warp on the Hydrodynamic Qualities of a Hypothetical
 Flying Boat Having a Hull LengthBeam Ratio of 15. TN 1828. March
 1949.
- Kapryan, Walter J. and Clement, Eugene P.: Effect of Increase in Afterbody Length on the Hydrodynamic Qualities of a Flying-Boat Hull of High Length-Beam Ratio. TN 1853, April 1949.

Seaplane Hull Variables

(2.3)

- Royer, Etienne: Commercial Airplanes and Seaplanes. TM 85, April 1922.
- Magaldi, Guilio: Hulls for Large Seaplanes. TM 295, Jan. 1925.
- Rohrbach, Adolf: Recent Experiments with Large Seaplanes. TM 353, March 1926.
- Herrmann, H.: Seaplane Floats and Hulls I. TM 426, Aug. 1927.
- Herrmann, H.: Seaplane Floats and Hulls
 II. TM 427, Sept. 1927.
- Herrmann, H.; Kempf, G. and Kloess, L.: Tank Tests of Twin Seaplane Floats. TM 486, Oct. 1928.
- Pegna, Giovanni: Some Ideas on Racing Seaplanes. TM 691, Nov. 1932.
- Hartman, Edwin P.: The Aerodynamic Drag of Flying-Boat Hull Models as Measured in the NACA 20-Foot Wind Tunnel.- I. TN 525, April 1935.
- Eula, Antonio: Hydrodynamic Tests of Models of Seaplane Floats. TM 770, May 1935.
- Sottorf, W.: The Design of Floats. TM 860, April 1938.
- Parkinson, J. B.: Tank Tests To Show the Effect of Rivet Heads on the Water Performance of a Seaplane Float. TN 657, July 1938.
- Parkinson, John B.; Olson, Roland E.; Draley, Eugene C. and Luoma, Arvo A.: Aerodynamic and Hydrodynamic Tests of a Family of Models of Flying-Boat Hulls Derived from a Streamline Body NACA Model 84 Series. Rept. 766, 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Analyses of Systematic Experiments on the Resistance and Porpoising Characteristics of Flying-Boat Hulls. ARR 3106 (WR W-68), Sept. 1943.
- Benson, James M. and Bidwell, Jerold M.: Bibliography and Review of Information Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept. 1945.

- Locke, F. W. S., Jr.: A Collection of the Collapsed Results of General Tank Tests of Miscellaneous Flying-Boat-Hull Models. TN 1182, March 1947.
- Locke, F. W. S., Jr.: A Graphical Method for Interpolation of Hydrodynamic Characteristics of Specific Flying Boats from Collapsed Results of General Tests of Flying-Boat-Hull Models. TN 1259, Jan. 1948.
- Parkinson, John B.: Take-Off Performance of Light Twin-Float Seaplanes. TN 1524, Feb. 1948.

LENGTH-BEAM RATIO

(2.3.1)

- Shoemaker, James M. and Parkinson, John B.: Tank Tests of a Family of Flying-Boat Hulls. TN 491, Feb. 1934.
- Eula, Antonio: Hydrodynamic Tests of Models of Seaplane Floats. TM 770, May 1935.
- Bell, Joe W.; Garrison, Charlie C. and Zeck, Howard: Effect of Length-Beam Ratio on Resistance and Spray of Three Models of Flying-Boat Hulls. ARR 3J23 (WR L-358), Oct. 1943.
- Parkinson, John B.: Design Criterions for the Dimensions of the Forebody of a Long-Range Flying Boat. ARR 3K08 (WR L-410), Nov. 1943.
- Locke, F. W. S., Jr.: Some Systematic Model Experiments of the Bow-Spray Characteristics of Flying-Boat Hulls Operating at Low Speeds in Waves. ARR 3L04 (WR W-71), Dec. 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: General Tank Tests on the Hydrodynamic Characteristics of Four Flying-Boat Hull Models of Differing Length-Beam Ratio. ARR 4F15 (WR W-105), June 1944.
- Locke, F. W. S., Jr.: "General" Main-Spray Tests of Flying-Boat Models in the Displacement Range. ARR 5A02 (WR W-72), April 1945.
- King, Douglas A. and Mas, Newton A.:
 Effects on Low-Speed Spray Characteristics of Various Modifications to a Powered Model of the Boeing XPBB-1 Flying Boat. ACR L5F07 (WR L-162), June 1945.

Bidwell, Jerold M. and Goldenbaum, David M.: Resistance Tests of Models of Three Flying-Boat Hulls with a Length-Beam Ratio of 10.5. ARR L5G19 (WR L-79), Sept. 1945.

- Land, Norman S.; Bidwell, Jerold M. and Goldenbaum, David M.: The Resistance of Three Series of Flying-Boat Hulls as Affected by Length-Beam Ratio. ARR L5G23 (WR L-764), Oct. 1945.
- Olson, Roland E. and Bell, Joe W.: Spray Characteristics of a Powered Dynamic Model of a Flying Boat Having a Hull with a Length-Beam Ratio of 9.0. ARR L5L29 (WR L-763), Jan. 1946.
- Locke, F. W. S., Jr.: An Analysis of the Main Spray Characteristics of Some Full-Size Multiengine Flying Boats. TN 1091, July 1946.
- Benscoter, Stanley U.: Estimate of Hull-Weight Change with Varying Length-Beam Ratio for Flying Boats. RM L7F24, Aug. 1947.
- Garrison, Charlie C. and Clement, Eugene P.: Tank Tests of Three Types of Afterbodies on a Flying-Boat Model with Basic Hull Length-Beam Ratio of 10.0. TN 1547, March 1948.
- Carter, Arthur W. and Haar, Marvin I.:
 Hydrodynamic Qualities of a Hypothetical Flying Boat with a Low-Drag
 Hull Having a Length-Beam Ratio of
 15. TN 1570, April 1948.
- Haar, Marvin I.: Tank Tests of a 1/10-Size Model of a Hypothetical Flying Boat with a Hull Length-Beam Ratio of 9.0. TN 1648, July 1948.
- Hodges, William W. and Woodward, David R.: Spray Characteristics of Four Flying-Boat Hulls as Affected by Length-Beam Ratio. TN 1726, Oct. 1948.
- Carter, Arthur W.: Effect of Hull Length-Beam Ratio on the Hydrodynamic Characteristics of Flying Boats in Waves. TN 1782, Jan. 1949.
- Carter, Arthur W. and Weinstein, Irving: Effect of Forebody Warp on the Hydrodynamic Qualities of a Hypothetical Flying Boat Having a Hull Length-Beam Ratio of 15. TN 1828, March 1949.
- Kapryan, Walter J. and Clement, Eugene P.: Effect of Increase in Afterbody Length on the Hydrodynamic Qualities of a Flying-Boat Hull of High Length-Beam Ratio. TN 1853, April 1949.

DEADRISE

303

(2.3.2)

- Shoemaker, James M. and Parkinson, John B.: Tank Tests of a Family of Flying-Boat Hulls. TN 491, Feb. 1934.
- Eula, Antonio: Hydrodynamic Tests of Models of Seaplane Floats. TM 770, May 1935.
- Dawson, John R.: Tank Tests of Three Models of Flying-Boat Hulls of the Pointed-Step Type with Different Angles of Dead Rise - NACA Model 35 Series. TN 551, Jan. 1936.
- Parkinson, John B.; Olson, Roland E. and House, Rufus O.: Hydrodynamic and Aerodynamic Tests of a Family of Models of Seaplane Floats with Varying Angles of Dead Rise NACA Models 57-A, 57-B, and 57-C. TN 716, July 1939.
- Diehl, Walter S.: The Application of Basic Data on Planing Surfaces to the Design of Flying-Boat Hulls. Rept. 694, 1940.
- Benson, James M. and Lina, Lindsay J.:
 The Effect of Dead Rise upon the Low-Angle Type of Porpoising. ARR (WR L-610), Oct. 1942.
- Truscott, Starr and Olson, Roland E.: The Longitudinal Stability of Flying Boats as Determined by Tests of Models in the NACA Tank. II Effect of variations in Form of Hull on Longitudinal Stability. ARR (WR L-468), Nov. 1942.
- Bell, Joe W. and Willis, John M., Jr.: The Effects of Angle of Dead Rise and Angle of Afterbody Keel on the Resistance of a Model of a Flying-Boat Hull. ARR (WR L-305), Feb. 1943.
- Benson, James M. and Klein, Milton M.: The Effect of Dead Rise upon the High-Angle Porpoising Characteristics of Two Planing Surfaces in Tandem. ARR 3F30 (WR L-306), June 1943.
- Locke, F. W. S., Jr. and Bott, Helen L.:
 A Method for Making Quantitative
 Studies of the Main Spray Characteristics of Flying-Boat Hull Models.
 ARR 3K11 (WR W-69), Nov. 1943.
- Locke, F. W. S., Jr.: Some Systematic Model Experiments of the Bow-Spray Characteristics of Flying-Boat Hulls Operating at Low Speeds in Waves. ARR 3L04 (WR W-71), Dec. 1943.
- Benson, James M. and Freihofner, Anton: Methods and Charts for Computing Stability Derivatives of a V-Bottom Planing Surface. ARR 3L08 (WR L-349), Dec. 1943.

Deadrise (Cont.)

- Mayo, Wilbur L.: Analysis and Modification of Theory for Impact of Seaplanes on Water. Rept. 810, 1945.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 3° Trim and with a 22-1/2° Angle of Dead Rise. RB L5A24 (WR L-211), Feb. 1945.
- Locke, F. W. S., Jr.: "General" Main-Spray Tests of Flying-Boat Models in the Displacement Range. ARR 5A02 (WR W-72), April 1945.
- Bidwell, Jerold M. and Goldenbaum, David M.: Resistance Tests of Models of Three Flying-Boat Hulls with a Length-Beam Ratio of 10.5. ARR L5G19 (WR L-79), Sept. 1945.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 0° and -3° Trim and with a 22-1/2° Angle of Dead Rise. TN 1166, April 1947.
- Miller, Robert W. and Leshnover, Samuel: Hydrodynamic Impact Loads in Smooth Water for a Prismatic Float Having an Angle of Dead Rise of 30°. TN 1325, June 1947.
- Milwitzky, Benjamin: A Generalized
 Theoretical and Experimental Investigation of the Motions and Hydrodynamic
 Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts.
 TN 1516, Feb. 1948.
- Garrison, Charlie C. and Clement, Eugene P.: Tank Tests of Three Types of Afterbodies on a Flying-Boat Model with Basic Hull Length-Beam Ratio of 10.0. TN 1547, March 1948.
- Milwitzky, Benjamin: A Generalized
 Theoretical Investigation of the Hydrodynamic Pitching Moments Experienced
 by V-Bottom Seaplanes During StepLanding Impacts and Comparisons
 with Experiment. TN 1630, June 1948.
- Edge, Philip M., Jr.: Hydrodynamic Impact Loads in Smooth Water for a Prismatic Float Having an Angle of Dead Rise of 40°. TN 1775, Jan. 1949.
- Carter, Arthur W. and Weinstein, Irving: Effect of Forebody Warp on the Hydrodynamic Qualities of a Hypothetical Flying Boat Having a Hull Length-Beam Ratio of 15. TN 1828, March 1949.

STEPS

(2.3.3)

- Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt," July 17, 1926, in Düsseldorf, Germany. From "Zeitschrift fur Flugtechnik und Motorluftschiffahrt," July 14, 1926. TM 379, Sept. 1926.
- Shoemaker, James M. and Bell, Joe W.: Complete Tank Tests of Two Flying-Boat Hulls with Pointed Steps - NACA Models 22-A and 35. TN 504, Sept. 1934.
- Eula, Antonio: Hydrodynamic Tests of Models of Seaplane Floats. TM 770, May 1935.
- Bell, Joe W.: The Effect of Depth of Step on the Water Performance of a Flying-Boat Hull Model NACA Model 11-C. TN 535, July 1935.
- Dawson, John R.: A General Tank Test of NACA Model 11-C Flying-Boat Hull, Including the Effect of Changing the Plan Form of the Step. TN 538, Aug. 1935.
- Parkinson, J. B.: Tank Tests of a Model of a Flying-Boat Hull Having a Longitudinal Concave Planing Bottom. TN 545, Nov. 1935.
- Dawson, John R.: Tank Tests of Three Models of Flying-Boat Hulls of the Pointed-Step Type with Different Angles of Dead Rise - NACA Model 35 Series. TN 551, Jan. 1936.
- Parkinson, J. B.: Tank Tests of Models of Floats for Single-Float Seaplanes -First Series. TN 563, April 1936.
- Allison, John M. and Ward, Kenneth E.: Tank Tests of Models of Flying Boat Hulls Having Longitudinal Steps. TN 574, July 1936.
- Dawson, John R.: Tank Tests of Two Models of Flying-Boat Hulls To Determine the Effect of Ventilating the Step. TN 594, Feb. 1937.
- Parkinson, J. B. and House, R. O.:
 Hydrodynamic and Aerodynamic Tests
 of Models of Floats for Single-Float
 Seaplanes NACA Models 41-D, 41-E,
 61-A, 73, and 73-A. TN 656, July
 1938.

Steps (Cont.)

- Truscott, Starr; Parkinson, J. B.; Ebert, John W., Jr. and Valentine, E. Floyd: Hydrodynamic and Aerodynamic Tests of Models of Flying-Boat Hulls Designed for Low Aerodynamic Drag NACA Models 74, 74-A, and 75. TN 668, Oct. 1938.
- Truscott, Starr and Olson, Roland E.: The Longitudinal Stability of Flying Boats as Determined by Tests of Models in the NACA Tank. II Effect of Variations in Form of Hull on Longitudinal Stability. ARR (WR L-468), Nov. 1942.
- Benson, James M.: Hydrodynamic-Stability Tests of a Model of a Flying Boat and of a Planing Surface Having a Small Downward Projection (Hook) on the Planing Bottom near the Step. RB (WR L-518), Jan. 1943.
- Benson, James M. and Lina, Lindsay J.: The Use of a Retractable Planing Flap Instead of a Fixed Step on a Seaplane. ARR 3E31 (WR L-237), May 1943.
- Bell, Joe W. and Havens, Robert F.: Tank Tests of a 1/8-Size Dynamic Model of the PB2Y-3 Airplane with Increased Power - NACA Model 131. MR (WR L-688), June 1943.
- Dawson, John R. and Wadlin, Kenneth L.: Preliminary Tank Tests with Planing-Tail Seaplane Hulls. ARR 3F15 (WR L-167), June 1943.
- Parkinson, John B.: Notes on the Skipping of Seaplanes. RB 3I27 (WR L-333), Sept. 1943.
- Parkinson, John B. and Land, Norman S.: The Landing Stability of a Powered Dynamic Model of a Flying Boat with a 30° V-Step and with Two Depths of Transverse Step. RB 4B14 (WR L-236), Feb. 1944.
- Benson, James M. and Freihofner, Anton: Landing Characteristics of a Model of a Flying Boat with the Depth of Step Reduced to Zero by Means of a Retractable Planing Flap. RB 4B08 (WR L-234), Feb. 1944.
- Locke, F. W. S., Jr. and Barklie, Jean A.: Tank Tests on the Resistance and Porpoising Characteristics of Three Flying-Boat Hull Models Equipped with Planing Flaps. ARR 4H30 (W-58), Nov. 1944.

- Woodward, David R. and Zeck, Howard: Spray Characteristics and Take-Off and Landing Stability of Several Modificiations of a 1/8-Size Model of the PBN-1 Flying Boat - NACA Model 192. MR L5C30 (WR L-567), April 1945.
- Benson, James M. and Havens, Robert F.:
 Tank Tests of a Flying-Boat Model
 Equipped with Several Types of Fairing Designed to Reduce the Air Drag
 of the Main Step. ARR L5C09b (WR
 L-150), April 1945.
- Locke, F. W. S., Jr. and Hugli, W. C., Jr.:
 A Method for Studying the Longitudinal
 Dynamic Stability of Flying-Boat-Hull
 Models at High Planing Speeds and
 During Landing. ARR 4H31 (WR W57), April 1945.
- Bidwell, Jerold M. and Goldenbaum, David M.: Resistance Tests of Models of Three Flying-Boat Hulls with a Length-Beam Ratio of 10.5. ARR L5G19 (WR L-79), Sept. 1945.
- Land, Norman S.: The Effect of Afterbody Length on the Hydrodynamic Stability of a Dynamic Model of a Flying Boat - Langley Tank Model 134. MR L5128a (WR L-684), Oct. 1945.
- Locke, F. W. S., Jr.: An Analysis of the Skipping Characteristics of Some Full-Size Flying Boats. ARR 5J24 (WR W-104), Jan. 1946.
- Dawson, John R.; McKann, Robert and Hay, Elizabeth S.: Tank Tests to Determine the Effect of Varying Design Parameters of Planing-Tail Hulls. II - Effect of Varying Depth of Step, Angle of Afterbody Keel, Length of Afterbody Chine, and Gross Load. TN 1101, July 1946.
- Carter, Arthur W.; Clement, Eugene P. and Morewitz, Alvin H.: An Investigation of Effects of Reversed-Type Longitudinal Steps on Resistance and Spray Characteristics of a Flying-Boat Hull. TN 1356, July 1947.
- Milwitzky, Benjamin: A Generalized
 Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts. TN 1516, Feb. 1948.
- Garrison, Charlie C. and Clement,
 Eugene P.: Tank Tests of Three
 Types of Afterbodies on a FlyingBoat Model with Basic Hull LengthBeam Ratio of 10.0. TN 1547, March
 1948.

Steps (Cont.)

- Milwitzky, Benjamin: A Generalized
 Theoretical Investigation of the Hydrodynamic Pitching Moments Experienced by V-Bottom Seaplanes During Step-Landing Impacts and Comparisons with Experiment. TN 1630, June 1948.
- Haar, Marvin I.: Tank Tests of a 1/10-Size Model of a Hypothetical Flying Boat with a Hull Length-Beam Ratio of 9.0. TN 1648, July 1948.
- Olson, Roland E. and Land, Norman S.:
 Effect of Afterbody Length and Keel
 Angle on Minimum Depth of Step for
 Landing Stability and on Take-Off
 Stability of a Flying Boat. TN 1571,
 Sept. 1948.
- Clark, R. B. and Sparrow, W. T.: Effect of Longitudinal Steps on Skipping Characteristics of PB2Y-6 Flying Boat. TN 1804, Jan. 1949.

AFTERBODY SHAPE

(2.3.4)

- Shoemaker, James M. and Bell, Joe W.:
 Complete Tank Tests of Two FlyingBoat Hulls with Pointed Steps NACA
 Models 22-A and 35. TN 504, Sept.
 1934.
- Dawson, John R.: Tank Tests of a Model of a Flying-Boat Hull with a Fluted Bottom. TN 522, March 1935.
- Eula, Antonio: Hydrodynamic Tests of Models of Seaplane Floats. TM 770, May 1935.
- Allison, John M.: The Effect of the Angle of Afterbody Keel on the Water Performance of a Flying-Boat Hull Model TN 541, Sept. 1935.
- Parkinson, John B. and Dawson, John R.: Tank Tests of NACA Model 40 Series of Hulls for Small Flying Boats and Amphibians. Rept. 543, 1936.
- Parkinson, J. B.: Tank Tests of Models of Floats for Single-Float Seaplanes - First Series. TN 563, April 1936.
- Allison, John M. and Ward, Kenneth E.: Tank Tests of Models of Flying Boat Hulls Having Longitudinal Steps. TN 574, July 1936.
- Parkinson, J. B. and House, R. O.: Hydro-dynamic and Aerodynamic Tests of Models of Floats for Single-Float Seaplanes NACA Models 41-D, 41-E, 61-A, 73, and 73-A. TN 656, July 1938.

- Parkinson, J. B.: Tank Tests To Show the Effect of Rivet Heads on the Water Performance of a Seaplane Float. TN 657, July 1938.
- Truscott, Starr; Parkinson, J. B.; Ebert, John W., Jr. and Valentine, E. Floyd: Hydrodynamic and Aerodynamic Tests of Models of Flying-Boat Hulls Designed for Low Aerodynamic Drag NACA Models 74, 74-A, and 75. TN 668, Oct. 1938.
- Truscott, Starr and Olson, Roland E.:
 The Longitudinal Stability of Flying
 Boats as Determined by Tests of
 Models in the NACA Tank. II Effect of Variations in Form of Hull
 on Longitudinal Stability. ARR (WR
 L-468), Nov. 1942.
- Bell, Joe W. and Willis, John M., Jr.: The Effects of Angle of Dead Rise and Angle of Afterbody Keel on the Resistance of a Model of a Flying-Boat Hull. ARR (WR L-305), Feb. 1943.
- Locke, Fred W. S., Jr.: A Correlation of the Dimensions, Proportions, and Loadings of Existing Seaplane Floats and Flying-Boat Hulls. ARR (WR W-41), March 1943.
- Land, Norman S. and Lina, Lindsay J.:
 Tests of a Dynamic Model in NACA
 Tank No. 1 to Determine the Effect
 of Length of Afterbody, Angle of Afterbody Keel, Gross Load, and a
 Pointed Step on Landing and Planing
 Stability. ARR (WR L-400), March
 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Systematic Model Experiments on the Porpoising Characteristics of Flying-Boat Hulls. ARR 3F12 (WR W-67), June 1943.
- Dawson, John R. and Wadlin, Kenneth L.: Preliminary Tank Tests with Planing-Tail Seaplane Hulls. ARR 3F15 (WR L-167), June 1943.
- Locke, F. W. S., Jr.: Some Systematic Model Experiments of the Bow-Spray Characteristics of Flying-Boat Hulls Operating at Low Speeds in Waves. ARR 3L04 (WR W-71), Dec. 1943.
- Wadlin, Kenneth L.: Preliminary Tank Experiments with a Hydrofoil on a Planing-Tail Seaplane Hull. RB L4C28, March 1944.
- Olson, Roland E.; Posner, Jack and Woodward, David R.: Resistance Tests of a 1/16-Size Model of the Hughes-Kaiser Flying Boat, NACA Model 183. MR (WR L-683), June 1944.

- Locke, F. W. S., Jr. and Barklie, Jean A.:
 Tank Tests of the Resistance and Porpoising Characteristics of Three Flying-Boat Hull Models Equipped with Planing Flaps. ARR 4H30 (W-58), Nov. 1944.
- Mayo, Wilbur L.: Analysis and Modification of Theory for Impact of Seaplanes on Water. Rept. 810, 1945.
- Woodward, David R. and Zeck, Howard: Spray Characteristics and Take-Off and Landing Stability of Several Modifications of a 1/8-Size Model of the PBN-1 Flying Boat - NACA Model 192. MR L5C30 (WR L-567), April 1945.
- King, Douglas A. and Mas, Newton A.:
 Effects on Low-Speed Spray Characteristics of Various Modifications to a Powered Model of the Boeing XPBB-1 Flying Boat. ACR L5F07 (WR L-162), June 1945.
- Land, Norman S.: The Effect of Afterbody Length on the Hydrodynamic Stability of a Dynamic Model of a Flying Boat - Langley Tank Model 134. MR L5I28a (WR L-684), Oct. 1945.
- Olson, Roland E. and Haar, Marvin I.:
 Tank Tests of a Powered Dynamic
 Model of a Flying Boat Having an Afterbody Length-Beam Ratio of 4.7 Langley Tank Model 203C-1 TED
 No. NACA 2351. MR L5I28 (WR L-762), Oct. 1945.
- Dawson, John R.; Walter, Robert C. and Hay, Elizabeth S.: Tank Tests To Determine the Effect on Planing-Tail Hulls of Varying Length, Width and Planform Taper of Afterbody. Rept. 844, 1946.
- Locke, F. W. S., Jr.: An Analysis of the Skipping Characteristics of Some Full-Size Flying Boats. ARR 5J24 (WR W-104), Jan. 1946.
- Parkinson, John B.: A Correlation of Loadings and Afterbody Length-Beam Ratios of Various Flying-Boat Hulls. ARR L6E28, June 1946.
- Dawson, John R.; McKann, Robert and Hay, Elizabeth S.: Tank Tests to Determine the Effect of Varying Design Parameters of Planing-Tail Hulls. II - Effect of Varying Depth of Step, Angle of Afterbody Keel, Length of Afterbody Chine, and Gross Load. TN 1101, July 1946.

- Garrison, Charlie C. and Clement, Eugene P.: Tank Tests of Three Types of Afterbodies on a Flying-Boat Model with Basic Hull Length-Beam Ratio of 10.0. TN 1547, March 1948.
- Haar, Marvin I.: Tank Tests of a 1/10-Size Model of a Hypothetical Flying Boat with a Hull Length-Beam Ratio of 9.0. TN 1648, July 1948.
- Olson, Roland E. and Land, Norman S.: Effect of Afterbody Length and Keel Angle on Minimum Depth of Step for Landing Stability and on Take-Off Stability of a Flying Boat. TN 1571, Sept. 1948.
- Kapryan, Walter J. and Clement, Eugene P.: Effect of Increase in Afterbody Length on the Hydrodynamic Qualities of a Flying-Boat Hull of High Length-Beam Ratio. TN 1853, April 1949.

FOREBODY SHAPE

(2.3.5)

- Truscott, Starr: The NACA Tank A High-Speed Towing Basin for Testing Models of Seaplane Floats. Rept. 470, 1933.
- Parkinson, John B.: A Complete Tank Test of a Model of a Flying-Boat Hull -NACA Model No. 11-A. TN 470, Sept. 1933.
- Parkinson, John B.: Tank Tests of Auxiliary Vanes as a Substitute for Planing Area. TN 490, Feb. 1934.
- Shoemaker, James M. and Parkinson, John B.: Tank Tests of a Family of Flying-Boat Hulls. TN 491, Feb. 1934.
- Shoemaker, James M. and Bell, Joe W.:
 Complete Tank Tests of Two Flying-Boat Hulls with Pointed Steps NACA Models 22-A and 35. TN 504, Sept. 1934.
- Dawson, John R.: Tank Tests of a Model of a Flying-Boat Hull with a Fluted Bottom. TN 522, March 1935.
- Eula, Antonio: Hydrodynamic Tests of Models of Seaplane Floats. TM 770, May 1935.
- Parkinson, J. B.: Tank Tests of Model 11-G Flying-Boat Hull. TN 531, June 1935.
- Dawson, John R.: A General Tank Test of NACA Model 11-C Flying-Boat Hull, Including the Effect of Changing the Plan Form of the Step. TN 538, Aug. 1935.

- Forebody Shape (Cont.)
- Parkinson, J. B.: Tank Tests of a Model of a Flying-Boat Hull Having a Longitudinal Concave Planing Bottom. TN 545, Nov. 1935.
- Parkinson, John B. and Dawson, John R.: Tank Tests of NACA Model 40 Series of Hulls for Small Flying Boats and Amphibians. Rept. 543, 1936.
- Dawson, John R.: Tank Tests of Three Models of Flying-Boat Hulls of the Pointed-Step Type with Different Angles of Dead Rise - NACA Model 35 Series. TN 551, Jan. 1936.
- Allison, John M. and Ward, Kenneth E.: Tank Tests of Models of Flying Boat Hulls Having Longitudinal Steps. TN 574, July 1936.
- Parkinson, J. B. and House, R. O.:
 Hydrodynamic and Aerodynamic Tests
 of Models of Floats for Single-Float
 Seaplanes NACA Models 41-D, 41-E,
 61-A, 73, and 73-A. TN 656, July
 1938.
- Parkinson, J. B.: Tank Tests to Show the Effect of Rivet Heads on the Water Performance of a Seaplane Float. TN 657, July 1938.
- Truscott, Starr; Parkinson, J. B.; Ebert, John W., Jr. and Valentine, E. Floyd: Hydrodynamic and Aerodynamic Tests of Models of Flying-Boat Hulls Designed for Low Aerodynamic Drag NACA Models 74, 74-A, and 75. TN 668, Oct. 1938.
- Parkinson, John B.; Olson, Roland E. and House, Rufus O.: Hydrodynamic and Aerodynamic Tests of a Family of Models of Seaplane Floats with Varying Angles of Dead Rise NACA Models 57-A, 57-B, and 57-C. TN 716, July 1939.
- Bell, Joe W. and Olson, Roland E.: Tank Tests to Determine the Effects of the Chine Flare of a Flying-Boat Hull. NACA Model Series 62 and 69. TN 725, Aug. 1939.
- Diehl, Walter S.: The Application of Basic Data on Planing Surfaces to the Design of Flying-Boat Hulls. Rept. 694, 1940.
- Truscott, Starr and Olson, Roland E.:
 The Longitudinal Stability of Flying
 Boats as Determined by Tests of
 Models in the NACA Tank. II Effect of Variations in Form of Hull
 on Longitudinal Stability. ARR (WR
 L-468), Nov. 1942.

- Olson, Roland E.: Investigation of the Effect of Spray Strips on the Low-Speed Spray Characteristics of a 1/8-Size Model of the Consolidated PB2Y-3 Flying Boat - NACA Model 116E-3. MR (WR L-616), Jan. 1943.
- Benson, James M.: Hydrodynamic-Stability Tests of a Model of a Flying Boat and of a Planing Surface Having a Small Downward Projection (Hook) on the Planing Bottom near the Step. RB (WR L-518), Jan. 1943.
- Truscott, Starr and Daniels, Charles J.: Investigation of the Effect of Ventilation on the Flow of Water over a Rounded Chine. RB, Feb. 1943.
- Locke, Fred W. S., Jr.: A Correlation of the Dimensions, Proportions, and Loadings of Existing Seaplane Floats and Flying-Boat Hulls. ARR (WR W-41), March 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Systematic Model Experiments on the Porpoising Characteristics of Flying-Boat Hulls. ARR 3F12 (WR W-67), June 1943.
- Parkinson, John B.: Design Criterions for the Dimensions of the Forebody of a Long-Range Flying Boat. ARR 3K08 (WR L-410), Nov. 1943.
- Locke, F. W. S., Jr.: Some Systematic Model Experiments of the Bow-Spray Characteristics of Flying-Boat Hulls Operating at Low Speeds in Waves. ARR 3L04 (WR W-71), Dec. 1943.
- Mayo, Wilbur L.: Analysis and Modification of Theory for Impact of Seaplanes on Water. Rept. 810, 1945.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 3° Trim and with a 22-1/2° Angle of Dead Rise. RB L5A24 (WR L-211), Feb. 1945.
- Woodward, David R. and Zeck, Howard: Spray Characteristics and Take-Off and Landing Stability of Several Modifications of a 1/8-Size Model of the PBN-1 Flying Boat - NACA Model 192. MR L5C30 (WR L-567), April 1945.
- King, Douglas A. and Mas, Newton A.:
 Effects on Low-Speed Spray Characteristics of Various Modifications to a Powered Model of the Boeing XPBB-1 Flying Boat. ACR L5F07 (WR L-162), June 1945.

- Mayo, Wilbur L.: Theoretical and Experimental Dynamic Loads for a Prismatic Float Having an Angle of Dead Rise of 22-1/2°. RB L5F15 (WR L-70), July 1945.
- Batterson, Sidney A. and Stewart, Thelma: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 6° and 9° Trim and a 22-1/2° Angle of Dead Rise. RB L5K21 (WR L-69), Feb. 1946.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 12° Trim and with a 22-1/2° Angle of Dead Rise. RB L5K21a (WR L-68), Feb. 1946.
- Locke, F. W. S., Jr.: An Analysis of the Main Spray Characteristics of Some Full-Size Multiengine Flying Boats. TN 1091, July 1946.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 0° and -3° Trim and with a 22-1/2° Angle of Dead Rise. TN 1166, April 1947.
- Miller, Robert W. and Leshnover, Samuel: Hydrodynamic Impact Loads in Smooth Water for a Prismatic Float Having an Angle of Dead Rise of 30°. TN 1325, June 1947.
- Carter, Arthur W.; Clement, Eugene P. and Morewitz, Alvin H.: An Investigation of Effects of Reversed-Type Longitudinal Steps on Resistance and Spray Characteristics of a Flying-Boat Hull. TN 1356, July 1947.
- Milwitzky, Benjamin: A Theoretical Investigation of Hydrodynamic Impact Loads on Scalloped-Bottom Seaplanes and Comparisons with Experiment. TN 1363, July 1947.
- Milwitzky, Benjamin: A Generalized
 Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts. TN 1516, Feb. 1948.
- Hodges, William W. and Woodward, David R.: Spray Characteristics of Four Flying-Boat Hulls as Affected by Length-Beam Ratio. TN 1726, Oct. 1948.
- Edge, Philip M., Jr.: Hydrodynamic Impact Loads in Smooth Water for a Frismatic Float Having an Angle of Dead Rise of 40°. TN 1775, Jan. 1949.

- Clark, R. B. and Sparrow, W. T.: Effect of Longitudinal Steps on Skipping Characteristics of PB2Y-6 Flying Boat. TN 1804, Jan. 1949.
- MacLeod, Richard G.: Aerodynamic Characteristics of a Flying-Boat Hull Having a Length-Beam Ratio of 15 and a Warped Forebody. RM L9A03, Feb. 1949.

CHINES

(2.3.6)

- Dawson, John R.: The Effect of Spray Strips on a Model of the P3M-1 Flying-Boat Hull. TN 482, Dec. 1933.
- Truscott, Starr: The Effect of Spray Strips on the Take-Off Performance of a Model of a Flying-Boat Hull. Rept. 503, 1934.
- Parkinson, John B. and Dawson, John R.: Tank Tests of NACA Model 40 Series of Hulls for Small Flying Boats and Amphibians. Rept. 543, 1936.
- Parkinson, J. B.: Tank Tests of Models of Floats for Single-Float Seaplanes - First Series. TN 563, April 1936.
- Parkinson, John B.; Olson, Roland E. and House, Rufus O.: Hydrodynamic and Aerodynamic Tests of a Family of Models of Seaplane Floats with Varying Angles of Dead Rise NACA Models 57-A, 57-B, and 57-C. TN 716, July 1939.
- Bell, Joe W. and Olson, Roland E.: Tank Tests to Determine the Effects of the Chine Flare of a Flying-Boat Hull. NACA Model Series 62 and 69. TN 725, Aug. 1939.
- Olson, Roland E.: Investigation of the Effect of Spray Strips on the Low-Speed Spray Characteristics of a 1/8-Size Model of the Consolidated PB2Y-3 Flying Boat - NACA Model 116E-3. MR (WR L-616), Jan. 1943.
- Truscott, Starr and Daniels, Charles J.: Investigation of the Effect of Ventilation on the Flow of Water over a Rounded Chine. RB, Feb. 1943.
- King, Douglas A. and Mas, Newton A.:
 Effects on Low-Speed Spray Characteristics of Various Modifications to a
 Powered Model of the Boeing XPBB-1
 Flying Boat. ACR L5F07 (WR L-162),
 June 1945.
- Bidwell, Jerold M. and Goldenbaum, David M.: Resistance Tests of Models of Three Flying-Boat Hulls with a Length-Beam Ratio of 10.5. ARR L5G19 (WR L-79), Sept. 1945.

Chines (Cont.)

- Dawson, John R.; McKann, Robert and Hay, Elizabeth S.: Tank Tests to Determine the Effect of Varying Design Parameters of Plaining-Tail Hulls. II - Effect of Varying Depth of Step, Angle of Afterbody Keel, Length of Afterbody Chine, and Gross Load. TN 1101, July 1946.
- Milwitzky, Benjamin: A Generalized Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts. TN 1516, Feb. 1948.
- Steiner, Margaret F.: Comparison of Over-All Impact Loads Obtained During Seaplane Landing Tests with Loads Predicted by Hydrodynamic Theory. TN 1781, Jan. 1949.
- MacLeod, Richard G.: Aerodynamic Characteristics of a Flying-Boat Hull Having a Length-Beam Ratio of 15 and a Warped Forebody. RM L9A03, Feb. 1949.
- Haines, Gilbert A.: Comparison of Pitching Moments Obtained During Seaplane Landings with Values Predicted by Hydrodynamic Impact Theory. TN 1881, May 1949.

Specific Seaplanes and Hulls

(2.4)

- Ravennes, Jean: Maritime Aviation. TM 109, July 1922.
- Crowley, J. W., Jr. and Ronan, K. M.: Characteristics of a Single Float Seaplane During Take-Off. Rept. 209, 1925.
- Crowley, J. W., Jr. and Ronan, K. M.: Characteristics of a Boat Type Seaplane During Take-Off. Rept. 226, 1926.
- Crowley, John W., Jr. and Ronan, K. M.: Characteristics of a Twin-Float Seaplane During Take-Off. Rept. 242, 1926.
- Rohrbach, Adolf: Recent Experiments with Large Seaplanes. TM 353, March 1926.
- Thompson, F. L.: Water-Pressure Distribution on a Seaplane Float. Rept. 290, 1928.
- Supermarine S.5 Seaplane (British), Winner of the 1927 Schneider Cup Race. AC 67, March 1928.
- The 1926 German Seaplane Contest.

 Seewald, F.: Part I: Lessons Taught.

 Blenk, H. and Liebers, F.: Part II
 Method of Rating. TM 454, March
 1928.
- Carroll, Thomas: A Dangerous Seaplane Landing Condition. TN 287, May 1928.
- Langley, M.: The Constructional Design of Metal Flying-Boat Hulls - I. Workshop Notes on the Building of Metal Hulls - II. TM 487, Nov. 1928.
- 'Thompson, F. L.: Water Pressure Distribution on a Twin-Float Seaplane. Rept. 328, 1929.
- Mathias, Gotthold and Holzapfel, Adolf: Technical Details in the Structural Development of Rohrbach Seaplanes. TM 541, Nov. 1929.
- Thompson, F. L.: Water Pressure Distribution on a Flying Boat Hull. Rept. 346, 1929.
- Gustosa, Corrado: Structural Details of the Giant Dornier Seaplane "Do X." TM 546, Jan. 1930.

- Pegna, Giovanni: Some Ideas on Racing Seaplanes. TM 691, Nov. 1932.
- Shoemaker, James M. and Parkinson, John B.: A Complete Tank Test of a Model of a Flying-Boat Hull NACA Model No. 11. TN 464, July 1933.
- Parkinson, John B.: A Complete Tank Test of a Model of a Flying-Boat Hull - NACA Model No. 11-A. TN 470, Sept. 1933.
- Shoemaker, James M.: A Complete Tank Test of a Model of a Flying-Boat Hull-NACA Model 16. TN 471, Sept. 1933.
- Bell, Joe W.: Tank Tests of Two Floats for High-Speed Seaplanes. TN 473, Nov. 1933.
- Dawson, John R.: The Effect of Spray Strips on a Model of the P3M-1 Flying-Boat Hull. TN 482, Dec. 1933.
- Truscott, Starr: The Effect of Spray Strips on the Take-Off Performance of a Model of a Flying-Boat Hull. Rept. 503, 1934.
- Shoemaker, James M. and Dawson, John R.: The Effect of Trim Angle on the Take-Off Performance of a Flying Boat. TN 486, Jan. 1934.
- Shoemaker, James M.: A Complete Tank Test of a Flying-Boat Hull with a Pointed Step - NACA Model No. 22. TN 488, Feb. 1934.
- Parkinson, John B.: Tank Tests of Auxiliary Vanes as a Substitute for Planing Area. TN 490, Feb. 1934.
- Shoemaker, James M. and Parkinson, John B.: Tank Tests of a Family of Flying-Boat Hulls. TN 491, Feb. 1934.
- Shoemaker, James M. and Bell, Joe W.: Complete Tank Tests of Two Flying-Boat Hulls with Pointed Steps-NACA Models 22-A and 35. TN 504, Sept. 1934.
- Dawson, John R.: A Complete Tank Test of the Hull of the Sikorsky S-40 Flying Boat - American Clipper Class. TN 512, Dec. 1934.
- Dawson, John R.: Tank Tests of a Model of a Flying-Boat Hull with a Fluted Bottom. TN 522, March 1935.

- Hartman, Edwin P.: The Aerodynamic Drag of Flying-Boat Hull Models as Measured in the NACA 20-Foot Wind Tunnel - I. TN 525, April 1935.
- Parkinson, J. B.: Tank Tests of Model 11-G Flying-Boat Hull. TN 531, June 1935.
- Bell, Joe W.: The Effect of Depth of Step on the Water Performance of a Flying-Boat Hull Model - NACA Model 11-C. TN 535, July 1935.
- Dawson, John R.: A General Tank Test of NACA Model 11-C Flying-Boat Hull, Including the Effect of Changing the Plan Form of the Step. TN 538, Aug. 1935.
- Allison, John M.: The Effect of the Angle of Afterbody Keel on the Water Performance of a Flying-Boat Hull Model. TN 541, Sept. 1935.
- Parkinson, J. B.: Tank Tests of a Model of a Flying-Boat Hull Having a Longitudinally Concave Planing Bottom. TN 545, Nov. 1935.
- Parkinson, J. B.: Tank Tests of Models of Floats for Single-Float Seaplanes - First Series. TN 563, April 1936.
- Bell, Joe W.: Tank Tests of a Model of the NC Flying-Boat Hull - NACA Model 44. TN 566, May 1936.
- Allison, John M.: Tank Tests of a Model of the Hull of the Navy PB-1 Flying Boat NACA Model 52. TN 576, Aug. 1936.
- Dawson, John R. and Truscott, Starr: A General Tank Test of a Model of the Hull of the British Singapore IIC Flying Boat. TN 580, Sept. 1936.
- Ward, Kenneth E.: Hydrodynamic Tests in the NACA Tank of a Model of the Hull of the Short Calcutta Flying Boat. TN 590, Jan. 1937.
- Dawson, John R.: Tank Tests of Two Models of Flying-Boat Hulls to Determine the Effect of Ventilating the Step. TN 594, Feb. 1937.
- Allison, John M.: Tank Tests of a Model of One Hull of the Savoia S-55-X Flying Boat - NACA Model 46. TN 635, Feb. 1938.
- Allison, John M.: Tank Tests of Model 36 Flying-Boat Hull. TN 638, March 1938.

- Parkinson, J. B. and House, R. O.: Hydrodynamic and Aerodynamic Tests of Models of Floats for Single-Float Seaplanes - NACA Models 41-D, 41-E, 61-A, 73, and 73-A. TN 656, July 1938.
- Truscott, Starr; Parkinson, J. B.; Ebert, John W., Jr. and Valentine, E. Floyd: Hydrodynamic and Aerodynamic Tests of Models of Flying-Boat Hulls Designed for Low Aerodynamic Drag NACA Models 74, 74-A, and 75. TN 668, Oct. 1938.
- Dawson, John R. and Hartman, Edwin P.: Hydrodynamic and Aerodynamic Tests of Four Models of Outboard Floats (NACA Models 51-A, 51-B, 51-C, and 51-D). TN 678, Dec. 1938.
- House, R. O.: The Aerodynamic Drag of Five Models of Side Floats NACA Models 51-E, 51-F, 51-G, 51-H, and 51-J. TN 680, Dec. 1938.
- Dawson, John R.: A General Tank Test of a Model of the Hull of the P3M-1 Flying Boat Including a Special Working Chart for the Determination of Hull Performance. TN 681, Dec. 1938.
- Parkinson, John B.; Olson, Roland E. and House, Rufus O.: Hydrodynamic and Aerodynamic Tests of a Family of Models of Seaplane Floats with Varying Angles of Dead Rise NACA Models 57-A, 57-B, and 57-C. TN 716, July 1939.
- Truscott, Starr: The Enlarged NACA Tank, and some of its Work. TM 918, Nov. 1939.
- Olson, Roland E. and Lina, Lindsay J.: Hydrodynamic Tests of a 1/10-Size Model of the Hull of the Latécoère 521 Flying Boat NACA Model 83. TN 836, Dec. 1941.
- Truscott, Starr and Dawson, John R.: A Comparison of the Results from General Tank Tests of 1/6- and 1/12-Full-Size Models of the British Singapore IIC Flying Boat. TN 858, Aug. 1942.
- Pearson, Henry A. and Smull, Leland K.: Control-Motion Studies of the PBM-3 Flying Boat in Abrupt Pull-Ups. MR (WR L-577), Nov. 1942.
- Parkinson, John B.; Olson, Roland E.; Draley, Eugene C. and Luoma, Arvo A.: Aerodynamic and Hydrodynamic Tests of a Family of Models of Flying-Boat Hulls Derived from a Streamline Body NACA Model 84 Series. Rept. 766, 1943.

- Carter, Arthur W .: General Free to Trim Tests in NACA Tank No. 2 of Three 1/8-Full-Size Models of Flying Boat Hulls at Low Speeds - NACA Models 116E-3k, 120R, and 143. MR (WR L-585), Jan. 1943.
- Olson, Roland E.: Investigation of the Effect of Spray Strips on the Low-Speed Spray Characteristics of a 1/8-Size Model of the Consolidated PB2Y-3 Flying Boat - NACA Model 116E-3. MR (WR L-616), Jan. 1943.
- Locke, Fred W. S., Jr.: A Correlation of the Dimensions, Proportions, and Loadings of Existing Seaplane Floats and Flying-Boat Hulls. ARR (WR W-41), March 1943.
- Nelson, William J. and Ebert, John W., Jr.: An Investigation of the Air Flow Around a Martin PBM-3 Flying Boat by Means of Tufts. MR (WR L-674), April 1943.
- Bell, Joe W. and Havens, Robert F.: Tank Tests of a 1/8-Size Dynamic Model of the PB2Y-3 Airplane with Simulated Jet Motors - NACA Models 131J, 131J-1, and 131J-2. MR (WR L-687), June 1943.
- Bell, Joe W. and Havens, Robert F.: Tank Tests of a 1/8-Size Dynamic Model of the PB2Y-3 Airplane with Increased Power - NACA Model 131. MR (WR L-688), June 1943.
- Locke, F. W. S., Jr.: General Porpoising Tests of Flying-Boat-Hull Models. ARR 3117 (WR W-96), Sept. 1943.
- Locke, F. W. S., Jr. and Bott, Helen L.: A Method for Making Quantitative Studies of the Main Spray Characteristics of Flying-Boat Hull Models. ARR 3K11 (WR W-69), Nov. 1943.
- Locke, F. W. S., Jr.: Some Systematic Model Experiments of the Bow-Spray Characteristics of Flying-Boat Hulls Operating at Low Speeds in Waves. ARR 3L04 (WR W-71), Dec. 1943.
- Olson, Roland E.; Posner, Jack and Woodward, David R.: Resistance Tests of a 1/16-Size Model of the Hughes-Kaiser Flying Boat, NACA Model 183. MR (WR L-683), June 1944.
- Woodward, David R. and Zeck, Howard: Spray Characteristics and Take-Off and Landing Stability of Several Modifications of a 1/8-Size Model of the PBN-1 Flying Boat - NACA Model 192. MR L5C30 (WR L-567), April 1945.

- King, Douglas A. and Mas, Newton A.: Effects on Low-Speed Spray Characteristics of Various Modifications to a Powered Model of the Boeing XPBB-1 Flying Boat. ACR L5F07 (WR L-162), June 1945.
- Benson, James M. and Bidwell, Jerold M.: Bibliography and Review of Information Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept. 1945.
- Olson, Roland E. and Haar, Marvin I .: Tank Tests of a Powered Dynamic Model of a Flying Boat Having an Afterbody Length-Beam Ratio of 4.7 -Langley Tank Model 203C-1 - TED No. NACA 2351. MR L5I28 (WR L-762), Oct. 1945.
- Land, Norman S.: The Effect of Afterbody Length on the Hydrodynamic Stability of a Dynamic Model of a Flying Boat -Langley Tank Model 134. MR L5128a (WR L-684), Oct. 1945.
- Olson, Roland E. and Bell, Joe W.: Spray Characteristics of a Powered Dynamic Model of a Flying Boat Having a Hull with a Length-Beam Ratio of 9.0. ARR L5L29 (WR L-763), Jan. 1946.
- King, Douglas A. and Hill, Mary B.: General Tank Tests of a 1/10-Size Model of the Hull of the Boeing XPBB-1 Flying Boat - Langley Tank Model 175. TN 1057, July 1946.
- Parkinson, John B.; Olson, Roland E. and Haar, Marvin I .: Tank Investigation of a Powered Dynamic Model of a Large Long-Range Flying Boat - Langley Tank Model 180. Rept. 870, 1947.
- Locke, F. W. S., Jr.: A Collection of the Collapsed Results of General Tank Tests of Miscellaneous Flying-Boat-Hull Models. TN 1182, March 1947.
- Garrison, Charlie C.; Goldenbaum, David M. and Hacskaylo, Andrew: Correlation of the Trim Limits of Stability Obtained for a PB2Y-3 Flying Boat and a 1/8-Size Powered Dynamic Model. RM L7C04, April 1947.
- Haar, Marvin I.: Tank Tests of a 1/10-Size Model of a Hypothetical Flying Boat with a Hull Length-Beam Ratio of 9.0. TN 1648, July 1948.
- Clark, R. B. and Sparrow, W. T.: Effect of Longitudinal Steps on Skipping Characteristics of PB2Y-6 Flying Boat. TN 1804, Jan. 1949.

Lateral Stabilizers

(2.5)

- Herrmann, H.; Kempf, G. and Kloess, H.: Tank Tests of Twin Seaplane Floats. TM 486, Oct. 1928.
- Schnadel, Georg: Relations Between Ship Design and Seaplane Design. TM 645, Nov. 1931.

WING-TIP FLOAT

(2.5.1)

- Diehl, W. S.: Static Stability of Seaplane Floats and Hulls. TN 183, March 1924.
- Warner, Edward P.: The Calculation of Wing Float Displacement in Single-Float Seaplanes. TN 215, March 1925.
- Dawson, John R. and Hartman, Edwin P.: Hydrodynamic and Aerodynamic Tests of Four Models of Outboard Floats (NACA Models 51-A, 51-B, 51-C, and 51-D). TN 678, Dec. 1938.

- House, R. O.: The Aerodynamic Drag of Five Models of Side Floats NACA Models 51-E, 51-F, 51-G, 51-H, and 51-J. TN 680, Dec. 1938.
- King, Douglas A.: Preliminary Tank Tests of an Outboard Float Having the Form of a Streamline Body of Revolution Fitted with a Hydrofoil. ACR L4D06 (WR L-724), April 1944.
- Carter, Arthur W.: Comparison of Design Specifications with the Actual Static Transverse Stability of 25 Seaplanes. TN 1253, April 1947.
- Milwitzky, Benjamin: A Generalized Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts. TN 1516, Feb. 1948.

Planing Surfaces

(2.6)

- Gebers, Friedrich: Law of Similitude for the Surface Resistance of Lacquered Planes Moving in a Straight Line Through Water. TM 308, April 1925.
- Schröder, P.: Determination of Resistance and Trimming Moment of Planing Water Craft. TM 619, May 1931.
- Seewald, Friedrich: On Floats and Float Tests. TM 639, Sept. 1931.
- Sottorf, W.: Experiments with Planing Surfaces. TM 661, March 1932.
- Sottorf, W.: Scale Effect of Model in Seaplane-Float Investigations. TM 704, April 1933.
- Sottorf, W.: Experiments with Planing Surfaces. TM 739, March 1934.
- Shoemaker, James M.: Tank Tests of Flat and V-Bottom Planing Surfaces. TN 509, Nov. 1934.
- Gruson, M. F.: Similitude in Hydrodynamic Tests Involving Planing. TM 795, May 1936.
- Weinig, F.: On the Theory of Hydrofoils and Planing Surfaces. TM 845, Jan. 1938.
- Sambraus, A.: Planing-Surface Tests at Large Froude Numbers - Airfoil Comparison. TM 848, Feb. 1938.
- Sottorf, W.: The Design of Floats. TM 860, April 1938.
- Perelmuter, A.: On the Determination of the Take-Off Characteristics of a Seaplane. TM 863, May 1938.
- Truscott, Starr and Parkinson, J. B.: The Increase in Frictional Resistance Caused by Various Types of Rivet Heads as Determined by Tests of Planing Surfaces. TN 648, May 1938.
- Parkinson, J. B.: Tank Tests to Show the Effect of Rivet Heads on the Water Performance of a Seaplane Float. TN 657, July 1938.
- Diehl, Walter S.: The Application of Basic Data on Planing Surfaces to the Design of Flying-Boat Hulls. Rept. 694, 1940.

- Sedov, L.: On the Theory of Unsteady Planing and the Motion of a Wing with Vortex Separation. TM 942, May 1940.
- Sottorf, W.: The Method of Extrapolation of the Resistance of a Model Planing Boat to full Size. TM 1007, March 1942.
- Benson, James M.: The Porpoising Characteristics of a Planing Surface Representing the Forebody of a Flying-Boat Hull. ARR (WR L-479), May 1942.
- Benson, James M. and Freihofner, Anton: Methods and Charts for Computing Stability Derivatives of a V-Bottom Planing Surface. ARR 3L08 (WR L-349), Dec. 1943.
- Locke, F. W. S., Jr.: General Resistance Tests on Flying-Boat Hull Models. ARR 4B19 (WR W-70), Feb. 1944.
- Sottorf, W.: Analysis of Experimental Investigations of the Flaning Process on the Surface of Water. TM 1061, March 1944.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 0° and -3° Trim and with a 22-1/2° Angle of Dead Rise. TN 1166, April 1947.
- Miller, Robert W. and Leshnover, Samuel: Hydrodynamic Impact Loads in Smooth Water for a Prismatic Float Having an Angle of Dead Rise of 30°. TN 1325, June 1947.
- Milwitzky, Benjamin: A Theoretical Investigation of Hydrodynamic Impact Loads on Scalloped-Bottom Seaplanes and Comparisons with Experiment. TN 1363, July 1947.
- Milwitzky, Benjamin: A Generalized Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes during Step-Landing Impacts. TN 1516, Feb. 1948.
- Wagner, Herbert: Planing of Watercraft. TM 1139, April 1948.
- Steiner, Margaret F.: Analysis of Planing Data for use in Predicting Hydrodynamic Impact Loads. TN 1694, Aug. 1948.

Hydrofoils

(2.7)

- Pegna, Giovanni: Some Ideas on Racing Seaplanes. TM 691, Nov. 1932.
- Parkinson, John B.: Tank Tests of Auxiliary Vanes as a Substitute for Planing Area. TN 490, Feb. 1934.
- Weinig, F.: On the Theory of Hydrofoils and Planing Surfaces. TM 845, Jan. 1938.
- Sambraus, A.: Planing-Surface Tests at Large Froude Numbers - Airfoil Comparison. TM 848, Feb. 1938.
- Ward, Kenneth E. and Land, Norman S.:
 Preliminary Tests in the NACA Tank
 to Investigate the Fundamental Characteristics of Hydrofoils. ACR (WR
 L-766), Sept. 1940.
- Benson, James M. and Land, Norman S.:
 An Investigation of Hydrofoils in the
 NACA Tank. I Effect of Dihedral and
 Depth of Submersion. ACR (WR L-758),
 Sept. 1942.
- Land, Norman S.: Characteristics of an NACA 66,S-209 Section Hydrofoil at Several Depths. CB 3E27 (WR L-757), May 1943.

- Benson, James M. and King, Douglas A.:
 Preliminary Tests to Determine the
 Dynamic Stability Characteristics of
 Various Hydrofoil Systems for Seaplanes and Surface Boats. RB 3K02
 (WR L-756), Nov. 1943.
- Walchner, O.: Profile Measurements During Cavitation. TM 1060, Jan. 1944.
- Wadlin, Kenneth L.: Preliminary Tank Experiments with a Hydrofoil on a Planing-Tail Seaplane Hull. RB L4C28 (WR L-725), March 1944.
- King, Douglas A.: Preliminary Tank Tests of an Outboard Float Having the form of a Streamline Body of Revolution Fitted with a Hydrofoil. ACR L4D06 (WR L-724), April 1944.
- Ackeret, J.: Experimental and Theoretical Investigations of Cavitation in Water. TM 1078, May 1945.
- Benson, James M. and Bidwell, Jerold M.: Bibliography and Review of Information Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept. 1945.
- Imlay, Frederick H.: Theoretical Motions of Hydrofoil Systems. TN 1285, Jan. 1947.

Impact Loads

(2.8)

- Lewe, Victor: Shape and Strength of Seaplane Under-Structures with Special Regard to Seaworthiness. TM 37, Aug. 1921.
- Thompson, F. L.: Water-Pressure Distribution on a Seaplane Float. Rept. 290, 1928.
- Thompson, F. L.: Water Pressure Distribution on a Twin-Float Seaplane. Rept. 328, 1929.
- Von Karman, Th.: The Impact on Seaplane Floats During Landing. TN 321, Oct. 1929.
- Thompson, F. L.: Water Pressure Distribution on a Flying Boat Hull. Rept. 346, 1930.
- Pabst, Wilhelm: Theory of the Landing Impact of Seaplanes. TM 580, Aug. 1930.
- Wagner, Herbert: Landing of Seaplanes. TM 622, May 1931.
- Pabst, Wilhelm: Landing Impact of Seaplanes. TM 624, June 1931.
- Seewald, Friedrich: On Floats and Float Tests. TM 639, Sept. 1931.
- Taub, Josef: Load Assumptions for the Landing Impact of Seaplanes. TM 643, Oct. 1931.
- Verduzio, Rudolfo: Stresses Developed in Seaplanes While Taking off and Landing. TM 677, July 1932.
- Pabst, Wilhelm: The Development of Floats and Equipment for Research in Promoting It. TM 740, March 1934.
- Weinig, F.: Impact of a Vee-Type Seaplane on Water with Reference to Elasticity. TM 810, Nov. 1936.
- Mewes, E.: The Impact on Floats or Hulls During Landing as Affected by Bottom Width. TM 811, Nov. 1936.
- Matthaes, K.: Strength Tests on Hulls and Floats. TM 1019, June 1942.
- Kreps, R. L.: Experimental Investigation of Impact in Landing on Water. TM 1046, Aug. 1943.

- Batterson, Sidney A.: The NACA Impact Basin and Water Landing Tests of a Float Model at Various Velocities and Weights. Rept. 795, 1944.
- Darevsky, V. M.: Determination of the Stresses Produced by the Landing Impact in the Bulkheads of a Seaplane Bottom. TM 1055, Jan. 1944.
- Biot, M. A. and Bisplinghoff, R. L.: Dynamic Loads on Airplane Structures
 During Landing. ARR 4H10 (WR W-92),
 Oct. 1944.
- Mayo, Wilbur L.: Analysis and Modification of Theory for Impact of Seaplanes on Water. Rept. 810, 1945.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 3° Trim and with a 22-1/2° Angle of Dead Rise. RB L5A24 (WR L-211), Feb. 1945.
- Mayo, Wilbur L.: Theoretical and Experimental Dynamic Loads for a Prismatic Float Having an Angle of Dead Rise of 22-1/2°. RB L5F15 (WR L-70), July 1945.
- Newell, Joseph S.: A Preliminary Survey of Existing Information Pertaining to Dynamic Loads in Aircraft Structures. CB 5H03, Aug. 1945.
- Batterson, Sidney A. and Stewart, Thelma: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 6° and 9° Trim and a 22-1/2° Angle of Dead Rise. RB L5K21 (WR L-69), Feb. 1946.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 12° Trim and with a 22-1/2° Angle of Dead Rise. RB L5K21a (WR L-68), Feb. 1946.
- Pierson, J. D.: JRM-1 Landing Impact Characteristics from Model Tests. ARR 5L03 (WR W-106), Feb. 1946.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 0° and -3° Trim and with a 22-1/2° Angle of Dead Rise. TN 1166, April 1947.

- Miller, Robert W. and Leshnover, Samuel: Hydrodynamic Impact Loads in Smooth Water for a Prismatic Float Having an Angle of Dead Rise of 30°. TN 1325, June 1947.
- Milwitzky, Benjamin: A Theoretical Investigation of Hydrodynamic Impact Loads on Scalloped-Bottom Seaplanes and Comparisons with Experiment. TN 1363, July 1947.
- Mayo, Wilbur L.: Solutions for Hydrodynamic Impact Force and Response of a Two-Mass System with an Application to an Elastic Airframe. TN 1398, Aug. 1947.
- Benscoter, Stanley U.: Impact Theory for Seaplane Landing. TN 1437, Oct. 1947.
- Milwitzky, Benjamin: A Generalized Theoretical and Experimental Investigation of the Motions and Hydrodynamic Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts. TN 1516, Feb. 1948.
- Benscoter, Stanley U.: Effect of Partial Wing Lift in Seaplane Landing Impact. TN 1563, April 1948.
- Steiner, Margaret F.: Analysis of Planing Data for use in Predicting Hydrodynamic Impact Loads. TN 1694, Aug. 1948.
- Savitsky, Daniel: Theoretical and Experimental Wing-Tip Accelerations of a Small Flying Boat During Landing Impacts. TN 1690, Sept. 1948.

- Miller, Robert W.: Hydrodynamic Impact Loads in Rough Water for a Prismatic Float Having an Angle of Dead Rise of 30°. TN 1776, Dec. 1948.
- Edge, Philip M., Jr.: Hydrodynamic Impact Loads in Smooth Water for a Prismatic Float Having an Angle of Dead Rise of 40°. TN 1775, Jan. 1949.
- Steiner, Margaret F.: Comparison of Over-All Impact Loads Obtained During Seaplane Landing Tests with Loads Predicted by Hydrodynamic Theory. TN 1781, Jan. 1949.
- Carter, Arthur W.: Effect of Hull Length-Beam Ratio on the Hydrodynamic Characteristics of Flying Boats in Waves. TN 1782, Jan. 1949.
- Carter, Arthur W. and Weinstein, Irving:
 Effect of Forebody Warp on the Hydrodynamic Qualities of a Hypothetical
 Flying Boat Having a Hull LengthBeam Ratio of 15. TN 1828, March
 1949.
- Kapryan, Walter J. and Clement, Eugene P.: Effect of Increase in Afterbody Length on the Hydrodynamic Qualities of a Flying-Boat Hull of High Length-Beam Ratio. TN 1853, April 1949.
- Haines, Gilbert A.: Comparison of Pitching Moments Obtained During Seaplane Landings with Values Predicted by Hydrodynamic Impact Theory. TN 1881, May 1949.

Ditching Characteristics

(2.9)

- Dawson, John R. and Jarvis, George A.:
 Ditching Tests with a 1/10-Size Model
 of the Army A-20A Airplane. I Calm-Water Tests in NACA Tank
 No. 2. MR (WR L-584), Nov. 1943.
- Fisher, Lloyd J. and Steiner, Margaret F.: Ditching Tests with a 1/12-Size Model of the Army B-26 Airplane in NACA Tank No. 2 and on an Outdoor Catapult. MR (WR L-619), Aug. 1944.
- Jarvis, George A. and Steiner, Margaret F.: Ditching Tests with a 1/11-Size Model of the Army B-25 Airplane in NACA Tank No. 2 and on an Outdoor Catapult. MR L4J11 (WR L-623), Oct. 1944.
- Steiner, Margaret F.: Acceleration and Bottom Pressures Measured on a B-24D Airplane in a Ditching Test. MR L4K14 (WR L-648), Nov. 1944.
- Jarvis, George A. and Steiner, Margaret F.: Ditching Tests with a 1/10-Size Model of the Army A-20A Airplane in Langley Tank No. 2 and on an Outdoor Catapult. MR L4K29a (WR L-618), Nov. 1944.
- Steiner, Margaret F.: Ditching Behavior of Military Airplanes as Affected by Ditching Aids. MR L5A16 (WR L-647), Jan. 1945.

- Tarshis, Robert P. and Stewart, Thelma:
 Ditching Tests with 1/16-Size Models
 of the Army B-17 Airplane in Langley
 Tank No. 2 and on an Outdoor Catapult. MR L5C24 (WR L-621), April
 1945.
- Fisher, Lloyd J. and Steiner, Margaret F.:
 Ditching Tests with a 1/16-Size Dynamic Model of the Army B-24 Airplane in Langley Tank No. 2 and on an Outdoor Catapult. MR L5D07 (WR L-620), April 1945.
- Dawson, John R.: The Effect of Some Design Parameters on Ditching Characteristics TED No. NACA 235. MR L5G06 (WR L-646), July 1945.
- Jarvis, George A. and Kolbe, Carl D.:
 Ditching Tests of a 1/8-Size Model of
 the Navy SB2C-1 Airplane (Army A-25)
 in Langley Tank No. 2 and an Outdoor
 Catapult TED No. NACA 235. MR
 L5L07 (WR L-622), Jan. 1946.
- Jarvis, George A. and Fisher, Lloyd J.:
 Correlation Tests of the Ditching Behavior of an Army B-24D Airplane and
 a 1/16-Size Model. MR L6A03 (WR
 L-617), Jan. 1946.
- Jarvis, George A. and Cederborg, Gibson A.: Ditching Tests of a 1/9-Size Model of the Army P-38 Airplane in Langley Tank No. 2 and at the Outdoor Catapult. RM L6J17, Nov. 1946.

Stability and Control (2.10)

- Green, M. W.: Measurement of the Moments of Inertia of Full Scale Airplanes. TN 265, Sept. 1927.
- Benson, James M. and King, Douglas A.:
 Preliminary Tests to Determine the
 Dynamic Stability Characteristics of
 Various Hydrofoil Systems for Seaplanes and Surface Boats. RB 3K02
 (WR L-756), Nov. 1943.
- Benson, James M.: Piloting of Flying Boats with Special Reference to Porpoising and Skipping. TN 923, Feb. 1944.
- Benson, James M. and Bidwell, Jerold M.:
 Bibliography and Review of Information Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept. 1945.
- Imlay, Frederick H.: Theoretical Motions of Hydrofoil Systems. TN 1285, Jan. 1947.
- Locke, F. W. S., Jr.: A Collection of the Collapsed Results of General Tank Tests of Miscellaneous Flying-Boat-Hull Models. TN 1182, March 1947.

LONGITUDINAL

(2.10.1)

- Crowley, J. W., Jr. and Ronan, K. M.: Characteristics of a Single Float Seaplane During Take-Off. Rept. 209, 1925.
- Crowley, J. W., Jr. and Ronan, K. M.: Characteristics of a Boat Type Seaplane During Take-Off. Rept. 226, 1926.
- Carroll, Thomas: A Dangerous Seaplane Landing Condition. TN 287, May 1928.
- Richardson, H. C.: The Reaction on a Float Bottom When Making Contact with Water at High Speeds. TN 288, May 1928.
- Thompson, F. L.: Water Pressure Distribution on a Twin-Float Seaplane. Rept. 328, 1929.
- Wagner, Herbert: Landing of Seaplanes. TM 622, May 1931.

- Parkinson, John B. and Olson, Roland E.: Tank Tests of a 1/5 Full-Size Dynamically Similar Model of the Army OA-9 Amphibian with Motor-Driven Propellers - NACA Model 117. ARR (WR L-475), Dec. 1941.
- Benson, James M.: The Porpoising Characteristics of a Planing Surface Representing the Forebody of a Flying-Boat Hull. ARR (WR L-479), May 1942.
- Benson, James M. and Lina, Lindsay J.:
 The Effect of Dead Rise upon the Low-Angle Type of Porpoising. ARR (WR L-610), Oct. 1942.
- Truscott, Starr and Olson, Roland E.: The Longitudinal Stability of Flying Boats as Determined by Tests of Models in the NACA Tank. II Effect of Variations in Form of Hull on Longitudinal Stability. ARR (WR L-468), Nov. 1942.
- Olson, Roland E. and Land, Norman S.:
 Methods Used in the NACA Tank for
 the Investigation of the LongitudinalStability Characteristics of Models of
 Flying Boats. Rept. 753, 1943.
- Olson, Roland E.: Investigation of the Effect of Spray Strips on the Low-Speed Spray Characteristics of a 1/8-Size Model of the Consolidated PB2Y-3 Flying Boat NACA Model 116E-3. MR (WR L-616), Jan. 1943.
- Benson, James M.: Hydrodynamic-Stability Tests of a Model of a Flying Boat and of a Planing Surface Having a Small Downward Projection (Hook) on the Planing Bottom Near the Step. RB (WR L-518), Jan. 1943.
- Ebert, John W., Jr.: A Comparison of the Porpoising Limits of Two Flying Boats and Their Tank Models. RB, Feb. 1943.
- Land, Norman S.: Effect of Powered Propellers on the Aerodynamic Characteristics and the Porpoising Stability of a Dynamic Model of a Long-Range Flying Boat. RB 3E13 (WR L-235), May 1943.
- Bell, Joe W. and Havens, Robert F.: Tank Tests of a 1/8-Size Dynamic Model of the PB2Y-3 Airplane with Simulated Jet Motors - NACA Models 131J, 131J-1, and 131J-2. MR (WR L-687), June 1943.

- Bell, Joe W. and Havens, Robert F.: Tank Tests of a 1/8-Size Dynamic Model of the PB2Y-3 Airplane with Increased Power - NACA Model 131. MR (WR L-688), June 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Systematic Model Experiments on the Porpoising Characteristics of Flying-Boat Hulls. ARR 3F12 (WR W-67), June 1943.
- Benson, James M. and Klein, Milton M.: The Effect of Dead Rise upon the High-Angle Porpoising Characteristics of Two Planing Surfaces in Tandem. ARR 3F30 (WR L-306), June 1943.
- Davidson, Kenneth S. M.: Porpoising: A Comparison of Theory with Experiment. ARR 3G07 (WR W-65), July 1943.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Analyses of Systematic Experiments on the Resistance and Porpoising Characteristics of Flying-Boat Hulls. ARR 3106 (WR W-68), Sept. 1943.
- Locke, F. W. S., Jr.: General Porpoising Tests of Flying-Boat-Hull Models. ARR 3117 (WR W-96), Sept. 1943.
- Parkinson, John B.: Notes on the Skipping of Seaplanes. RB 3I27 (WR L-333), Sept. 1943.
- Benson, James M. and Freihofner, Anton: Landing Characteristics of a Model of a Flying Boat with the Depth of Step Reduced to Zero by Means of a Retractable Planing Flap. RB 4B08 (WR L-234), Feb. 1944.
- Parkinson, John B. and Land, Norman S.: The Landing Stability of a Powered Dynamic Model of a Flying Boat with a 30° V-Step and with Two Depths of Transverse Step. RB 4B14 (WR L-236), Feb. 1944.
- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: General Tank Tests on the Hydrodynamic Characteristics of Four Flying-Boat Hull Models of Differing Length-Beam Ratio. ARR 4F15 (WR W-105), June 1944.
- Locke, F. W. S., Jr. and Barklie, Jean A.:
 Tank Tests of the Resistance and Porpoising Characteristics of Three Flying-Boat Hull Models Equipped with Planing Flaps. ARR 4H30 (W-58), Nov. 1944.

- Woodward, David R. and Zeck, Howard: Spray Characteristics and Take-Off and Landing Stability of Several Modifications of a 1/8-Size Model of the PBN-1 Flying Boat - NACA Model 192. MR L5C30 (WR L-567), April 1945.
- Locke, F. W. S., Jr. and Hugli, W. C., Jr.:
 A Method for Studying the Longitudinal
 Dynamic Stability of Flying-Boat-Hull
 Models at High Planing Speeds and
 During Landing. ARR 4H31 (WR
 W-57), April 1945.
- Benson, James M. and Havens, Robert F.:
 Tank Tests of a Flying-Boat Model
 Equipped with Several Types of Fairing Designed to Reduce the Air Drag
 of the Main Step. ARR L5C09b (WR
 L-150), April 1945.
- Olson, Roland E. and Haar, Marvin I.:
 Tank Tests of a Powered Dynamic
 Model of a Flying Boat Having an
 Afterbody Length-Beam Ratio of 4.7 Langley Tank Model 203C-1 TED No.
 NACA 2351. MR L5128 (WR L-762),
 Oct. 1945.
- Land, Norman S.: The Effect of Afterbody Length of the Hydrodynamic Stability of a Dynamic Model of a Flying Boat -Langley Tank Model 134. MR L5128a (WR L-684), Oct. 1945.
- Locke, F. W. S., Jr.: An Analysis of the Skipping Characteristics of Some Full-Size Flying Boats. ARR 5J24 (WR W-104), Jan. 1946.
- Parkinson, John B.; Olson, Roland E. and Haar, Marvin I.: Tank Investigation of a Powered Dynamic Model of a Large Long-Range Flying Boat - Langley Tank Model 180. Rept. 870, 1947.
- Locke, F. W. S., Jr.: A Graphical Method for Interpolation of Hydrodynamic Characteristics of Specific Flying Boats from Collapsed Results of General Tests of Flying-Boat-Hull Models. TN 1259, Jan. 1948.
- Garrison, Charlie C. and Clement, Eugene P.: Tank Tests of Three Types of Afterbodies on a Flying-Boat Model with Basic Hull Length-Beam Ratio of 10.0. TN 1547, March 1948.
- Carter, Arthur W. and Haar, Marvin I.:
 Hydrodynamic Qualities of a Hypothetical Flying Boat with a Low-Drag
 Hull Having a Length-Beam Ratio of
 15. TN 1570, April 1948.
- Haar, Marvin I.: Tank Tests of a 1/10-Size Model of a Hypothetical Flying Boat with a Hull Length-Beam Ratio of 9.0. TN 1648, July 1948.

Longitudinal (Cont.)

- Olson, Roland E. and Land, Norman S.: Effect of Afterbody Length and Keel Angle on Minimum Depth of Step for Landing Stability and on Take-Off Stability of a Flying Boat. TN 1571, Sept. 1948.
- Clark, R. B. and Sparrow, W. T.: Effect of Longitudinal Steps on Skipping Characteristics of PB2Y-6 Flying Boat. TN 1804, Jan. 1949.
- Carter, Arthur W. and Weinstein, Irving: Effect of Forebody Warp on the Hydrodynamic Qualities of a Hypothetical Flying Boat Having a Hull Length-Beam Ratio of 15. TN 1828, March 1949.
- Kapryan, Walter J. and Clement, Eugene P.: Effect of Increase in Afterbody Length on the Hydrodynamic Qualities of a Flying-Boat Hull of High Length-Beam Ratio. TN 1853, April 1949.

LATERAL

(2.10.2)

Diehl, W. S.: Static Stability of Seaplane Floats and Hulls. TN 183, March 1924.

- Warner, Edward P.: The Calculation of Wing Float Displacement in Single-Float Seaplanes. TN 215, March 1925.
- Truscott, Starr and Olson, Roland E.: The Longitudinal Stability of Flying Boats as Determined by Tests of Models in the NACA Tank. II Effect of Variations in Form of Hull on Longitudinal Stability. ARR (WR L-468), Nov. 1942.
- Carter, Arthur W.: Comparison of Design Specifications with the Actual Static Transverse Stability of 25 Seaplanes. TN 1253, April 1947.

DIRECTIONAL

(2.10.3)

- Locke, F. W. S., Jr.: Some Yawing Tests of a 1/30-Scale Model of the Hull of the XPB2M-1 Flying Boat. ARR 3G06 (WR W-66), July 1943.
- Locke, F. W. S., Jr.: A Preliminary Correlation of the Behavior of Water Rudders on Seaplanes and Flying Boats. TN 1387, Aug. 1947.

Surface Craft

(2.11)

Rizzo, Frank: The Flettner Rotor Ship in the Light of the Kutta-Joukowski Theory and of Experimental Results. TN 228, Oct. 1925.

Land, Norman S.: Tank Tests of a Grunberg-Type High-Speed Boat with Lifting Hydrofoil and Planing Surface Stabilizers. MR, July 1940.

Benson, James M. and King, Douglas A.:
Preliminary Tests to Determine the
Dynamic Stability Characteristics of
Various Hydrofoil Systems for Seaplanes and Surface Boats. RB 3K02
(WR L-756), Nov. 1943.

Imlay, Frederick H.: Theoretical Motions of Hydrofoil Systems. TN 1285, Jan. 1947.

PROPULSION
(3)

Complete Systems

(3.1)

- Buckingham, Edgar: Jet Propulsion for Airplanes. Rept. 159, 1923.
- Roy, Maurice: Propulsion by Reaction. TM 571, June 1930.
- Schubauer, G. B.: Jet Propulsion with Special Reference to Thrust Augmentors. TN 442, Jan. 1933.
- Ober, Shatswell: Estimation of the Variation of Thrust Horsepower with Air Speed. TN 446, Feb. 1933.
- Schrenk, Martin: Take-Off and Propeller Thrust. TM 703, April 1933.
- Biermann, David: Relative Efficiencies and Design Charts for Various Engine-Propeller Combinations. ACR, Sept. 1936.
- White, Roland J. and Martin Victor J.: Charts for Calculating the Performance of Airplanes Having Constant-Speed Propellers. TN 579, Sept. 1936.
- Ackeret, J.: Present and Future Problems of Airplane Propulsion. TM 976, May 1941.
- Silverstein, Abe and Wilson, Herbert A., Jr.: Drag and Propulsive Characteristics of Air-Cooled Engine-Nacelle Installations for Large Airplanes. Rept. 746, 1942.
- Campini, S.: Analytical Theory of the Campini Propulsion System. TM 1010, March 1942.
- Ackeret, J. and Keller, D. C.: Aerodynamic Heat-Power Engine Operating on a Closed Cycle. TM 1034, Nov. 1942.
- Ellis, Macon C., Jr. and Brown, Clinton E.: NACA Investigation of a Jet-Propulsion System Applicable to Flight. Rept. 802, 1944.
- Goldstein, Arthur W.: Analysis of the Performance of a Jet Engine from Characteristics of the Components. I Aerodynamic and Matching Characteristics of the Turbine Component Determined with Cold Air. TN 1459, Oct. 1947.

- English, Robert E. and Hauser, Cavour H.:
 A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants
 Driving Propellers. TN 1497, Jan.
 1948.
- Kaufman, Samuel J. and Boman, David S.: Comparison of Computed Performance of Composite Power Plants Using 18-Cylinder Aircraft Engines with 62° and 40° Valve Overlap. TN 1500, Jan. 1948.

RECIPROCATING ENGINES

(3.1.1)

- Lucke, Charles E.: Thermodynamic Efficiency of Present Types of Internal Combustion Engines for Aircraft.

 I Review of the Development of Engines Suitable for Aeronautic Service.

 II Aero Engines Analyzed with Reference to Elements of Process or Function. Rept. 7, 1915.
- Nutting, E. M. and Lewis, G. W.: Air Flow Through Poppet Valves. Rept. 24, 1918.
- De Bothezat, George: Airplane Performances as Influenced by the Use of a Supercharged Engine. TN 2, May 1920.
- Margoulis, W.: The Steadiness Factor in Engine Sets. TN 19, Dec. 1920.
- Sparrow, S. W.: High Thermal Efficiency in Airplane Service. TN 39, Dec. 1920.
- Gage, Victor R.: Some Factors of Airplane Engine Performance. Rept. 108, 1921.
- Anon.: Development of Aeronautical Engines by the Army and Navy. TM 9, March 1921.
- Margoulis, W.: Abacus Giving the Variation of the Mean Pressure of an Aviation Engine as a Function of Its Speed of Rotation. TM 12, March 1921.
- Boccaccio, Paul: The Coupling of Engines. TM 14, April 1921.
- Lagarde, C. Martinot: Vibrations of Aviation Engines. TM 56, Jan. 1922.

- Reciprocating Engines (Cont.)
- Diehl, Walter S.: Engine Performance and the Determination of Absolute Ceiling. Rept. 171, 1923.
- Kutzbach, K.: The Flexible Mounting of an Airplane Engine. TN 148, July 1923.
- Raffaelli, Italo: Effect of Altitude on Power of Aviation Engines. TM 287, Nov. 1924.
- Lehr, G.: Aviation Engines in the Endurance Content. TM 290, Dec. 1924.
- Fell, L. F. R.: Light Aeroplane Engine Development. TM 309, April 1925.
- Prayer, Georg: Increasing the Power of Internal Combustion Engines. TM 321, July 1925.
- Ware, Marsden: Description of the NACA Universal Test Engine and Some Test Results. Rept. 250, 1927.
- Gove, W. D.: The Variation in Engine Power with Altitude Determined from Measurements in Flight with a Hub Dynamometer. Rept. 295, 1928.
- Weick, Fred E.: The Drag of a J-5 Radial Air-Cooled Engine. TN 292, July 1928.
- Fliedner, C. S.: Condensed Data on the Aircraft Engines of the World. TN 303, April 1929.
- Gosslau, F.: Mathematical and Experimental Investigation of Heat Control and Power Increase in Air-Cooled Aircraft Engines. TM 540, Nov. 1929.
- Oestrich, Hermann: Prospects for Jet Propulsion of Airplanes with Special Reference to Exhaust Gases. MP-34, May 1932.
- Lürenbaum, Karl: Torsional Vibration of Aircraft Engines. TM 672, May 1932.
- Löhner, Kurt: Development of Air-Cooled Engines with Blower Cooling. TM 725, Oct. 1933.
- Brevoort, Maurice J.: Combustion-Engine Temperatures by the Sodium Line-Reversal Method. TN 559, March 1936.
- Précoul, Michel: The Horsepower of Aircraft Engines and Their Maximum Frontal Area. TM 812, Nov. 1936.
- Kurtz, Oskar: Research and Design Problems Introduced by Increased Power Output. TM 840, Oct. 1937.

- Gropp, H.: Engines and Propellers for Powered Gliders and Light Airplanes. TM 850, March 1938.
- Vohrer, Eugen: The Way to Increased Airplane Engine Power. TM 894, May 1939.
- Wenger, Hermann: Measurement of the Air-Flow Velocity in the Cylinder of an Airplane Engine. TM 923, Dec. 1939.
- Lee, Dana W.: A Study of the Air Movements in Two Aircraft-Engine Cylinders. TN 766, July 1940.
- Gerrish, Harold C. and Voss, Fred: Analysis of Cylinder-Pressure-Indicator Diagrams Showing Effects of Mixture Strength and Spark Timing. TN 772, Aug. 1940.
- Wilson, Herbert A., Jr. and Lehr, Robert R.: Drag and Propulsive Characteristics of Air-Cooled Engine-Nacelle Installations for Two-Engine Airplanes. ACR (WR L-428), Dec. 1940.
- Lutz, O.: Dynamic Similitude in Internal-Combustion Engines. TM 978, May 1941.
- Langley Memorial Aeronautical Laboratory: Construction of Finned Aluminum Muffs for Aircraft-Engine Cylinder Barrels. CB (WR E-81), April 1942.
- Meier, Adolf: Recording Rapidly Changing Cylinder-Wall Temperatures. TM 1013, May 1942.
- Brevoort, Maurice J.; Stickle, George W. and Hill, Paul R.: Generalized Selection Charts for Bombers Powered by One, Two, Four, and Six 2000-Horsepower Engines. I. Capacity and Economy. MR (WR L-658), Sept. 1942.
- Brevoort, Maurice J.; Stickle, George W. and Hill, Paul R.: Generalized Selection Charts for Bombers Powered by Two, Four, and Six 3000-Horsepower Engines. I. Capacity and Economy. MR (WR L-672), Jan. 1943.
- Marquardt, R. E.: A Study of Cooling and Exhaust Disposal in Submerged Engine Installations. ACR 3J28, Oct. 1943.
- Butze, Helmut F.: Dilution of Exhaust-Gas Samples from a Multicylinder Engine Equipped with an Exhaust-Gas Collector. RB E5B10 (WR E-63), Feb. 1945.
- Tischbein, Hans W.: The Friction of Piston Rings. TM 1069, March 1945.

- Reciprocating Engines (Cont.)
- Bailey, F. J., Jr. and Voglewede, T. J.:
 An Estimate of the Effect of Engine
 Supercharging on the Take-Off Thrust
 of a Typical Helicopter at Different
 Altitudes and Temperatures. TED
 No. NACA 1301. MR L5C12b (WR
 L-592), March 1945.
- Tauschek, Max J.; Corrington, Lester C. and Huppert, Merle C.: Nitrous Oxide Supercharging of an Aircraft-Engine Cylinder. MR E5F26 (WR E-199), June 1945.
- Johnson, Robert L. and Anderson, Roy I.: Single-Cylinder Engine Tests of Porous Chrome-Plated Cylinder Barrels with Special Bore Coatings for Radial Air-Cooled Engines. ARR E5L18a (WR E-28), Jan. 1946.
- Gilbert, Mitchell; Howard, John N. and Hicks, Bruce L.: An Analysis of the Factors Affecting the State of Fuel and Air Mixtures. TN 1078, May 1946.
- Stanitz, John D.: An Analysis of the Factors that Affect the Exhaust Process of a Four-Stroke-Cycle Reciprocating Engine. TN 1242, April 1947.
- Kaufman, Samuel J. and Boman, David S.:
 Comparison of Computed Performance
 of Composite Power Plants Using 18Cylinder Aircraft Engines with 62°
 and 40° Valve Overlap. TN 1500,
 Jan. 1948.

SPARK-IGNITION ENGINES (3.1.1.1)

- Diederichs, H. and Upton, G. B.: Mufflers for Aeronautic Engines. Rept. 10, 1916.
- Dickinson, H. C.; James, W. S. and
 Anderson, G. V.: Effect of Compression Ratio, Pressure, Temperature,
 and Humidity on Power. I Variation
 of Horsepower with Altitude and Compression Ratio. Rept. 45-I, 1919.
- Dickinson, H. C. and Anderson, G. V.: Effect of Compression Ratio, Pressure, Temperature, and Humidity on Power. II - Value of Supercharging. Rept. 45-II (Cont'd), 1919.
- Dickinson, H. C.; James, W. S. and Anderson, G. V.: Effect of Compression Ratio, Pressure, Temperature, and Humidity on Power. III Variation of Horsepower with Temperature. Rept. 45-III (Cont'd), 1919.

- Brinkerhoff, V. W.: Effect of Compression Ratio, Pressure, Temperature, and Humidity on Power. IV Influence of Water Injection on Engine Performance. Rept. 45-IV (Cont'd), 1919.
- Gage, Victor R.: A Study of Airplane Engine Tests. Rept. 46, 1920.
- Schwager, Otto: Recent Efforts and Experiments in the Construction of Aviation Engines. TN 12, Sept. 1920.
- Noack, W. G.: Tests of the Daimler D-IVa Engine at a High Altitude Test Bench. TN 15, Oct. 1920.
- Sparrow, S. W. and White, H. S.: Performance of a Liberty 12 Airplane Engine. Rept. 102, 1921.
- Sparrow, S. W. and White, H. S.: Performance of a 300-Horsepower Hispano-Suiza Airplane Engine. Rept. 103, 1921.
- Heller, A.: The 300 H. P. Benz Aircraft Engine. TN 34, Jan. 1921.
- Seppeler, E.: The Past and Future Evolution of Aviation Engines. Misc. Paper No. 3, April 1921.
- Kook, E.: Simple Means for Saving Fuel on Traffic Flights. TM 26, June 1921.
- Schwager, Otto: Preliminary Calculations of Cylinder Dimensions for Aircraft Engines. TM 38, Sept. 1921.
- Sparrow, S. W.: Performance of Maybach 300-Horsepower Airplane Engine. Rept. 134, 1922.
- Sparrow, S. W.: Performance of B.M.W. 185-Horsepower Airplane Engine. Rept. 135, 1922.
- Schwager, O.: Behavior of Aviation Engines at Different Air Densities. TM 60, Jan. 1922.
- Diehl, Walter S.: Engine Performance and the Determination of Absolute Ceiling. Rept. 171, 1923.
- Ziembinske, S.: Possible Improvements in Gasoline Engines. TM 182, Jan. 1923.
- Fedden, A. H.: Fixed Air-Cooled Engines. TM 185, Feb. 1923.
- Kutzbach, K.: Adaptation of Aeronautical Engines to High Altitude Flying. TN 142, May 1923.
- Sparrow, Stanwood W.: Relation of Fuel-Air Ratio to Engine Performance. Rept. 189, 1924.

- Spark-Ignition Reciprocating Engines (Cont.)
- Sparrow, Stanwood W.: Correcting Horsepower Measurements to a Standard Temperature. Rept. 190, 1924.
- Raffaelli, Italo: Effect of Altitude on Power of Aviation Engines. TM 287, Nov. 1924.
- Du Bois, R. N.: The Testing of Aviation Engines Under Approximate Altitude Conditions. TN 210, Dec. 1924.
- Wilson, E. E.: Aircraft Engine Design. TN 211, Jan. 1925.
- Jalbert, J.: Two-Stroke-Cycle Engines for Airplanes. TM 347, Jan. 1926.
- Anon.: Mixing and Ignition in Supercharged Engines. TM 360, April 1926.
- Ricardo, H. R.: Some Notes on Gasoline-Engine Development. TM 420, July 1927.
- Holm, Otto: Crank Case Scavenging of a Two-Stroke-Cycle Engine. TM 446, Jan. 1928.
- Brooks, Donald B.: Correcting Engine Tests for Humidity. TN 309, June 1929.
- List, Hans: Crank Case Scavenging of Two-Stroke-Cycle Engines. TM 516, June 1929.
- Rothrock, A. M.: Injection Lags in a Common-Rail Fuel Injection System. TN 332, Feb. 1930.
- Leglise, Pierre: The 1600 hp Hispano-Suiza Engine. A 1929 Schneider Cup Engine. MP 28, Aug. 1931.
- Anon: The Rolls-Royce Engines for the 1931 Schneider Trophy Race. MP 33, Nov. 1931.
- Weidinger, Hans: Liquid Cooling of Aircraft Engines. TM 649, Dec. 1931.
- Brooks, D. B. and Garlock, E. A.: The Effect of Humidity on Engine Power at Altitude. Rept. 426, 1932.
- Taylor, Edward S.: Valve Timing of Engines Having Intake Pressures Higher Than Exhaust. TN 405, Feb. 1932.
- Schey, Oscar W. and Young, Alfred W.:
 Performance of a Fuel-Injection
 Spark-Ignition Engine Using a Hydrogenated Safety Fuel. Rept. 471,
 1933.
- Kurtz, Oskar: Knowledge Gained from Practical Experience in the Designing of Aircraft Engines. TM 706, May 1933.

- Schey, Oscar W. and Young, Alfred W.: Engine Performance with a Hydrogenated Safety Fuel. TN 466, July 1933.
- Garlock, E. A. and Ellis, Greer: The Effect on Engine Performance of Change in Jacket-Water Outlet Temperature. TN 476, Nov. 1933.
- Spanogle, J. A. and Whitney, E. G.:
 A Description and Test Results of a
 Spark-Ignition and a Compression.
 Ignition 2-Stroke-Cycle Engine. Rept.
 495, 1934.
- Venediger, Herbert J.: Evaluation of Scavenging in Two-Stroke-Cycle Engines. TM 732, Jan. 1934.
- Venediger, Herbert J.: A Discussion of the Several Types of Two-Stroke-Cycle Engines. TM 776, Sept. 1935.
- Rogowski, A. R. and Bouchard, C. L.: Scavenging a Piston-Ported Two-Stroke Cylinder. TN 674, Nov. 1938.
- Ragazzi, Paolo: The Power of Aircraft Engines at Altitude. TM 895, May 1939.
- Zeman, J.: Two-Stroke-Cycle Engines with Un-Symmetrical Control Diagram (Supercharged Engines). TM 908, Sept. 1939.
- Manganiello, Eugene J.: Piston Temperatures in an Air-Cooled Engine for Various Operating Conditions. Rept. 698, 1940.
- Rogowski, A. R.; Bouchard, C. L. and Taylor, C. Fayette: The Effect of Piston-Head Shape, Cylinder-Head Shape, and Exhaust Restriction, on the Performance of a Piston-Ported Two-Stroke Cylinder. TN 756, March 1940.
- Bona, C. F.: Italian High-Speed Airplane Engines. TM 944, June 1940.
- Rothrock, A. M.; Spencer, R. C. and Miller, Cearcy D.: A High-Speed Motion-Picture Study of Normal Combustion, Knock, and Preignition in a Spark-Ignition Engine. Rept. 704, 1941.
- Sarracino, Marcello: New Method of Calculating the Power at Altitude of Aircraft Engines Equipped with Superchargers on the Basis of Tests Made Under Sea-Level Conditions. TM 981, July 1941.
- Young, Alfred W.: Investigation of Performance of 9-Cylinder Engine Using Large Valve Overlap and Eclipse Fuel-Injection System. ARR (WR E-52), Nov. 1941.

- Spark-Ignition Reciprocating Engines (Cont.)
- Biermann, David and Conway, Robert N.:
 Propeller Charts for the Determination
 of the Rotational Speed for the Maximum Ratio of the Propulsive Efficiency
 to the Specific Fuel Consumption. Rept.
 749, 1942.
- Sanders, Newell D. and Barnett, Henry C.: Effect of Varying Percentages of Exhaust Gas on Engine Performance. RB 3D27 (WR E-120), April 1943.
- Campbell, Paul J.: Tests of Exhaust Propulsion Nozzles. ARR 3E21 (WR' W-43), May 1943.
- Pinkel, Benjamin: Effect of Exhaust Back Pressure on Engine Power. CB 3F17 (WR E-116), June 1943.
- Rogowski, A. R. and Taylor, C. Fayette: Part-Throttle Operation and Control of a Piston-Ported Two-Stroke Cylinder. TN 919, Nov. 1943.
- Turner, L. Richard and Humble, Leroy V.: Flame-Visibility Tests with Individual Exhaust Stacks. ARR 4B08 (WR E-147), Feb. 1944.
- Huppert, Merle C.; Imming, Harry S. and Richard, Paul H.: The Effect of Oil Consumption and Piston Cooling on Knock-Limited Aircraft-Engine Performance. RB E4E04 (WR E-22), May 1944.
- White, H. Jack and Engelman, Helmuth W.:
 Effect of Fuel Volatility on Performance of a Wright R-2600-8 Engine as
 Influenced by Mixture Distribution.
 ARR E4105 (WR E-87), Sept. 1944.
- Zipkin, M. A. and Sanders, J. C.: Correlation of Exhaust-Valve Temperatures with Engine Operating Conditions and Valve Design. Rept. 813, 1945.
- Pinkel, Benjamin and Rupert, Kennedy F.:
 Correlation of Wright Aeronautical
 Corporation Cooling Data on the R3350-14 Intermediate Engine and Comparison with Data from the Langley
 16-Foot High-Speed Tunnel. ACR
 E5A18 (WR E-60), Jan. 1945.
- Monroe, Louis L. and Friedman, Harold E.: Cooling of a Wright R-3350 Engine by Water Injection to the Individual Cylinders. MR E5B27 (WR E-254), Feb. 1945.
- Farmer, J. Elmo and Munger, Maurice: Fuel Consumption Corrected for Cooling Drag of an Air-Cooled Radial Aircraft Engine at Low Fuel-Air Ratios and with Variable Spark Advance. ARR E5B01b (WR E-100), Feb. 1945.

- Livengood, James C. and Eppes, James V. D.: Effect of Changing the Stroke on Air Capacity, Power Output, and Detonation of a Single-Cylinder Engine. ARR 4E24 (WR W-50), Feb. 1945.
- Pfender, John F.; Dudugjian, Carl and Lietzke, A. F.: Effect of Engine-Operating Variables and Internal Coolants on Spark-Advance Requirements of an Allison V-1710 Cylinder. MR E5E18 (WR E-198), May 1945.
- Zeman, J.: Recent Development of the Two-Stroke Engine. II - Design Features. TM 1082, May 1945.
- Tauschek, Max J.; Corrington, Lester C. and Huppert, Merle C.: Nitrous Oxide Supercharging of an Aircraft-Engine Cylinder. MR E5F26 (WR E-199), June 1945.
- Nelson, R. Lee; Harries, Myron L. and Brun, Rinaldo J.: Effect of Internal Coolants on the Knock-Limited Performance of an Allison V-1710-99 Engine with a Compression Ratio of 6.0. MR E5F30 (WR E-260), June 1945.
- Mulcahy, B. A. and Zipkin, M. A.: The Effects of an Increase in the Concentration of Ethylene Dibromide in a Leaded Fuel on Lead Deposition, Corrosion of Exhaust Valves, and Knock-Limited Power. ARR E5E04a (WR E-43), June 1945.
- Harris, Herbert B.; Duffy, Robert T. and Erwin, Robert D., Jr.: Effect of Maximum Cruise-Power Operation at Ultra-Lean Mixture and Increased Spark Advance on the Mechanical Condition of Cylinder Components. MR E5I27a (WR E-268), Sept. 1945.
- Mulcahy, B. A. and Zipkin, M. A.: Tests of Improvements in Exhaust-Valve Performance Resulting from Changes in Exhaust-Valve and Port Design. ARR E5G26 (WR E-45), Sept. 1945.
- Manganiello, Eugene J. and Bernardo, Everett: Cylinder Temperatures of Two Liquid-Cooled Aircraft Cylinders for Various Engine and Coolant Conditions. ARR E5H13 (WR E-146), Oct. 1945.
- Miller, Cearcy D.: Relation Between Spark Ignition Engine Knock, Detonation Waves and Autoignition as Shown by High-Speed Photography. Rept. 855, 1946.

- Spark-Ignition Reciprocating Engines (Cont.)
- Miller, Cearcy D.; Olsen, H. Lowell; Logan, Walter O. and Osterstrom, Gordon E.: Analysis of Spark-Ignition Engine Knock as Seen by Photographs Taken at 200,000 Frames per Second. Rept. 857, 1946.
- Holms, Arthur G. and Faldetta, Richard D.: Strain-Gage Study of Internally Cooled Exhaust Valves Having Various Throat Designs. TN 1116, Aug. 1946.
- Standahar, Ray M. and McCarty, James S.:
 Effect of Modifications to Induction
 System on Altitude Performance of
 V-1710-93 Engine. III Use of Parabolic Rotating Guide Vanes and NACADesigned Auxiliary-Stage Inlet Elbow
 and Interstage Duct. RM E6L27, Jan.
 1947.
- Sutor, Alois T.; Corrington, Lester C. and Dudugjian, Carl: Exhaust-Valve Temperatures in a Liquid-Cooled Aircraft-Engine Cylinder as Affected by Engine Operating Variables. TN 1209, Feb. 1947.
- Boman, David S.; Nagey, Tibor F. and Doyle, Ronald B.: Effect of Exhaust Pressure on the Performance of an 18-Cylinder Air-Cooled Radial Engine with a Valve Overlap of 40 Degrees. TN 1220, March 1947.
- Humble, Leroy V.; Nagey, Tibor F. and Boman, David S.: The Effect of Exhaust Pressure on the Performance of an 18-Cylinder Air-Cooled Radial Engine with a Valve Overlap of 62 Degrees. TN 1232, March 1947.
- Desmon, Leland G. and Doyle, Ronald B.: Effect of Exhaust Pressure on the Performance of a 12-Cylinder Liquid-Cooled Engine. TN 1367, July 1947.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Types of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- Michel, Donald J.; Hickel, Robert O. and Voit, Charles H.: Performance of a Double-Row Radial Aircraft Engine with Three Methods of Safety-Fuel Injection. TN 1413, Aug. 1947.
- Eppes, James V. D.; Livengood, James C. and Taylor, C. Fayette: The Effect of Changing the Ratio of Exhaust-Valve Flow Capacity to Inlet-Valve Flow Capacity on Volumetric Efficiency and Output of a Single-Cylinder Engine. TN 1365, Oct. 1947.

- Creagh, John W. R.; Hartmann, Melvin J. and Arthur, W. Lewis, Jr.: An Investigation of Valve-Overlap Scavenging over a Wide Range of Inlet and Exhaust Pressures. TN 1475, Nov. 1947.
- Livengood, James C. and Eppes, James V. D.: Effect of Changing Manifold Pressure, Exhaust Pressure, and Valve Timing on the Air Capacity and Output of a Four-Stroke Engine Operated with Inlet Valves of Various Diameters and Lifts. TN 1366, Dec. 1947.
- Desmon, Leland G. and Doyle, Ronald B.: Calculated Performance of 12-Cylinder Liquid-Cooled Engine with Exhaust-Gas Turbine Geared to Crankshaft. TN 1602, June 1948.
- Povolny, John H. and Chelko, Louis J.: Cylinder-Head Temperatures and Coolant Heat Rejection of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. TN 1606, June 1948.
- Lord, Albert M.; Heinicke, Orville H. and Stricker, Edward G.: Effect of Exhaust Pressure on Knock-Limited Performance of an Air-Cooled Aircraft-Engine Cylinder. TN 1617, June 1948.
- Corrington, Lester C. and Fisher, William F.: Effect of Preignition on Cylinder Temperatures, Pressures, Power Output, and Piston Failures. TN 1637, June 1948.
- Lundin, Bruce T.; Povolny, John H. and Chelko, Louis J.: Correlation of Cylinder-Head Temperatures of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. RM E8B06, Aug. 1948.
- Povolny, John H. and Lundin, Bruce T.: Correlation of Coolant Heat Rejections of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. RM E8B06a, Aug. 1948.
- Povolny, John H.; Bogdan, Louis J. and Chelko, Louis J.: Effect of Engine and Coolant Variables on Cylinder-Head Temperatures and Coolant Heat Rejection of a Multicylinder Liquid-Cooled Engine of 1650-Cubic-Inch Displacement. RM E8C01, Sept. 1948.

COMPRESSION-IGNITION (DIESEL) ENGINES (3.1.1.2)

Schwager, Otto: Recent Efforts and Experiments in the Construction of Aviation Engines. TN 12, Sept. 1920.

- Compression-Ignition (Diesel Reciprocating Engines (Cont.)
- Frey, Ernst: The Small Diesel Engine as an Automotive Engine. TM 43, Sept. 1921.
- Fiore, Amedeo: Bagnulo Heavy Fuel Internal Combustion Engine and Its Employment in Aviation. TM 73, March 1922.
- Matthews, Robertson: Influences in the Selection of a Cycle for Small High-Speed Engines Running on Solid or Airless Injection with Compression Ignition. TN 149, July 1923.
- Matthews, Robertson and Gardiner, Arthur W.: The Influence of Inlet Air Temperature and Jacket Water Temperature on Initiating Combustion in a High Speed Compression Ignition Engine. TN 185, March 1924.
- Hesselman, K. J. E.: Hesselman Heavy-Oil High-Compression Engine. TM 312, April 1925.
- Gardiner, Arthur W.: A Preliminary Study of Fuel Injection and Compression Ignition as Applied to an Aircraft Engine Cylinder. Rept. 243, 1926.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part I A General Discussion of the Subject of Fuel Injection in Diesel Engines and Detailed Descriptions of Many Types of Injection Nozzles.

 TM 356, April 1926.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part II A Discussion of the Semi-Diesel Principle and Its Application to Various Types of Solid-Injection Engines. TM 357, April 1926.
- Buchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part III A Discussion of Fuel Mixing and Ignition, with Special Reference to Engines with Precombustion Chambers. TM 358, April 1926.
- Kemper, Carlton: Improving the Performance of a Compression Ignition Engine by Directing Flow of the Inlet Air. TN 242, July 1926.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. I Engines with External Atomization of the Fuel. Engines with Internal Atomization of the Fuel. Hot-Bulb Engines. Diesel Engines. TM 397, Feb. 1927.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part II. TM 403, March 1927.

- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part III. TM 410, May 1927.
- Bielefeld, F. Ernst: Recent Suggestions in Diesel-Engine Construction. TM 425, Aug. 1927.
- Gelalles, A. G. and Rothrock, A. M.:
 Experimental and Analytical Determination of the Motion of Hydraulically Operated Valve Stems in Oil Engine Injection Systems. Rept. 330, 1928.
- Neumann, Kurt: The Diesel as a Vehicle Engine. TM 467, June 1928.
- Rothrock, A. M. and Beardsley, E. G.: Some Effects of Air Flow on the Penetration and Distribution of Oil Sprays. TN 329, Dec. 1929.
- Rothrock, A. M.: Injection Lags in a Common-Rail Fuel Injection System. TN 332, Feb. 1930.
- Gelalles, A. G.: Some Effects of Air and Fuel Oil Temperatures on Spray Penetration and Dispersion. TN 338, May 1930.
- Gasterstädt, Dr.: Development of the Junkers-Diesel Aircraft Engine. TM 565, May 1930.
- Spanogle, J. A. and Foster, H. H.: Performance of a High-Speed Compression-Ignition Engine Using Multiple Orifice Fuel Injection Nozzles. TN 344, June 1930.
- Neumann, Kurt: Diesel-Engine Investigations. Ignition-Chamber Engines. TM 589, Oct. 1930.
- Gelalles, A. G.: Effect of Orifice Length-Diameter Ratio on Fuel Sprays for Compression-Ignition Engines. Rept. 402, 1931.
- Léglise, Pierre: Clerget 100 hp Heavy-Oil Engine. TM 603, Jan. 1931.
- Spanogle, J. A. and Foster, H. H.: Basic Requirements of Fuel-Injection Nozzles for Quiescent Combustion Chambers. TN 382, June 1931.
- Spanogle, J. A. and Moore, C. S.: Performance of a Compression-Ignition Engine with a Precombustion Chamber Having High-Velocity Air Flow. TN 396, Oct. 1931.
- Anon.: Performance of Two-Stroke Cycle Diesel Engines at High Altitudes with Particular Reference to Junkers F 0 4 Heavy-Oil Aircraft Engine. Misc. Paper No. 32, Nov. 1931.

- Compression-Ignition (Diesel Reciprocating
- Engines (Cont.)
 Lee, Dana W.: The Effect of Nozzle Design and Operating Conditions on the Atomization and Distribution of Fuel Sprays. Rept. 425, 1932.
- Gelalles, A. G. and Marsh, E. T .: Rates of Fuel Discharge as Affected by the Design of Fuel-Injection Systems for Internal-Combustion Engines. Rept. 433, 1932.
- Lee, Dana W.: Experiments on the Distribution of Fuel in Fuel Sprays. 483, 1932.
- Spanogle, J. A. and Moore, C. S.: Considerations of Air Flow in Combustion Chambers of High-Speed Compression-Ignition Engines. TN 414, April 1932.
- Moore, C. S. and Collins, J. H., Jr.: The Effect of Clearance Distribution on the Performance of a Compression-Ignition Engine with a Precombustion Chamber. TN 435, Nov. 1932.
- Moore, C. S. and Collins, J. H., Jr.: The Effect of Connecting-Passage Diameter on the Performance of a Compression-Ignition Engine with a Precombustion Chamber. TN 436, Nov. 1932.
- Lee, Dana W. and Spencer, Robert C.: Photomicrographic Studies of Fuel Sprays. Rept. 454, 1933.
- Spanogle, J. A.; Hicks, C. W. and Foster, H. H.: Increasing the Air Charge and Scavenging the Clearance Volume of a Compression-Ignition Engine. Rept. 469, 1933.
- List, Hans: Increasing the Volumetric Efficiency of Diesel Engines by Intake Pipes. TM 700, March 1933.
- Kurtz, Oskar: Knowledge Gained from Practical Experience in the Designing of Aircraft Engines. TM 706, May 1933.
- Spanogle, J. A. and Whitney, E. G.: A Description and Test Results of a Spark-Ignition and a Compression-Ignition 2-Stroke-Cycle Engine. Rept. 495, 1934.
- Spanogle, J. A.: A Comparison of Several Methods of Measuring Ignition Lag in a Compression-Ignition Engine. TN 485, Jan. 1934.
- Moore, C. S. and Collins, J. H., Jr .: Effect of Combustion-Chamber Shape on the Performance of a Prechamber Compression-Ignition Engine. TN 514, Dec. 1934.

- Lee, Dana W .: A Comparison of Fuel Sprays from Several Types of Injection Nozzles. Rept. 520, 1935.
- Moore, C. S. and Foster, H. H.: Performance Tests of a Single-Cylinder Compression-Ignition Engine with a Displacer Piston. TN 518, Feb. 1935.
- Lee, Dana W.: Measurements of Fuel Distribution Within Sprays for Fuel-Injection Engines. Rept. 565, 1936.
- Foster, H. H.: The Quiescent-Chamber Type of Compression-Ignition Engine. Rept. 568, 1936.
- Gerrish, Harold C. and Ayer, Bruce E.: Influence of Fuel-Oil Temperature on the Combustion in a Prechamber Compression-Ignition Engine. TN 565, April 1936.
- Moore, Charles S. and Foster, Hampton H.: Boosted Performance of a Compression-Ignition Engine with a Displacer Piston. TN 569, May 1936.
- Moore, Charles S. and Collins, John H. Jr.: Friction of Compression-Ignition Engines. TN 577, Aug. 1936.
- Moore, Charles S. and Collins, John H., Jr.: Prechamber Compression-Ignition Engine Performance. Rept. 577, 1937.
- Earle, Sherod L. and Dutee, Francis J .: Effect of Air-Entry Angle on Performance of a 2-Stroke-Cycle Compression-Ignition Engine. TN 610, Aug. 1937.
- Moore, Charles S. and Collins, John H., Jr.: Compression-Ignition Engine Performance at Altitudes and at Various Air Pressures and Temperatures. TN 619, Nov. 1937.
- Petersen, Hans: Investigation of Ignition and Combustion Processes of Diesel Engines Operating with Turbulence and Air-Storage Chambers. TM 857, April 1938.
- Rogowski, A. R.; Bouchard, C. L. and Taylor, C. Fayette: The Effect of Piston-Head Shape, Cylinder-Head Shape, and Exhaust Restriction, on the Performance of a Piston-Ported Two-Stroke Cylinder. TN 756, March 1940.
- Schweitzer, P. H. and DeLuca, Frank, Jr.: The Tracer Gas Method of Determining the Charging Efficiency of Two-Stroke-Cycle Diesel Engines. TN 838, Jan. 1942.

- Compression-Ignition (Diesel Reciprocating Engines (Cont.)
- Hall, Eldon W.: A Theoretical Analysis of the Performance of a Diesel Engine-Compressor-Turbine Combination for Aircraft. ACR E5D10 (WR E-31), April 1945.
- Sanders, J. C. and Mendelson, Alexander:
 Calculations of the Performance of a
 Compression-Ignition Engine-Compressor Turbine Combination. I Performance of a Highly Supercharged
 Compression-Ignition Engine. ARR
 E5K06 (WR E-234), Dec. 1945.
- Zinner, K.: The Combination of Internal-Combustion Engine and Gas Turbine. TM 1141, April 1947.

RECIPROCATING ENGINES TURBINES

(3.1.2)

- Keenan, Joseph H.; Shapiro, Ascher H.; Kaye, Joseph and Rieke, Carol A.: Systems CET, CEHT, and CETX Analysis of a Power Plant of High Efficiency and Great Overload Capacity. ACR 3H31, Aug. 1943.
- Zinner, K.: The Combination of Internal-Combustion Engine and Gas Turbine. TM 1141, April 1947.
- Kaufman, Samuel J. and Boman, David S.:
 Comparison of Computed Performance
 of Composite Power Plants Using 18Cylinder Aircraft Engines with 62°
 and 40° Valve Overlap. TN 1500,
 Jan. 1948.
- Desmon, Leland G. and Doyle, Ronald B.: Calculated Performance of 12-Cylinder Liquid-Cooled Engine with Exhaust-Gas Turbine Geared to Crankshaft. TN 1602, June 1948.
- Boman, David S. and Kaufman, Samuel J.: Effect of Reducing Valve Overlap on Engine and Compound-Power-Plant Performance. TN 1612, June 1948.

TURBOSUPERCHARGED ENGINES (3.1.2.1)

- Devillers, René: The Problem of the Turbo-Compressor. TN 11, Aug. 1920.
- Lester, E. M. and Paulson, W. A.: Performance Characteristics of an Aircraft Engine with Exhaust Turbine Supercharger. ACR, May 1941.

- Rea, James Buchanan: A Method of Determining the Equilibrium Performance and the Stability of an Engine Equipped with an Exhaust Turbosupercharger. TN 831, Nov. 1941.
- NACA Subcommittee on Recovery of Power from Exhaust Gas: Recommended Test Procedure for Aircraft Engine Turbosupercharger Power Plants. ARR 3F22 (WR E-135), June 1943.
- Lyons, Richard E. and Coles, Willard D.:
 Laboratory Investigation of Icing in
 the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. III Heated Air as a Means of
 De-Icing the Carburetor and Inlet
 Elbow. MR E5L19 (WR E-172),
 Dec. 1945.
- Sanders, J. C. and Mendelson, Alexander:
 Calculations of the Performance of a
 Compression-Ignition Engine-Compressor Turbine Combination. I Performance of a Highly Supercharged
 Compression-Ignition Engine. ARR
 E5K06 (WR E-234), Dec. 1945.
- Turner, L. Richard; Lowdermilk, Warren H. and Lord, Albert M.: Performance of Hoods for Aircraft Exhaust-Gas Turbines. TN 1149, Nov. 1946.
- Weise, A.: Practical Possibilities of High-Altitude Flight with Exhaust-Gas Turbines in Connection with Spark Ignition Engines Comparative Thermodynamic and Flight Mechanical Investigations. TM 1124, April 1947.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Types of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- Desmon, Leland G. and Doyle, Ronald B.: Calculated Performance of 12-Cylinder Liquid-Cooled Engine with Exhaust-Gas Turbine Geared to Crankshaft. TN 1602, June 1948.
- Desmon, Leland G. and Sams, Eldon W.:
 Performance of Exhaust-Gas Blowdown
 Turbine and Various Engine Systems
 Using a 12-Cylinder Liquid-Cooled
 Engine. TN 1735, Nov. 1948.
- Mendelson, Alexander: Calculated Performance of a Compression-Ignition Engine-Compressor-Turbine Combination Based on Experimental Data. TN 1774, Dec. 1948.

COMPOUND ENGINES (3.1.2.2)

Pinkel, Benjamin and Turner, L. Richard: Flight Tests of Exhaust Gas Jet Propulsion. ACR (WR E-105), Nov. 1940.

- Compound Engines (Cont.)
- Manganiello, Eugene J.: A Preliminary Investigation of Exhaust-Gas Ejectors for Ground Cooling. ACR, July 1942.
- Turner, L. Richard and White, Maurice D.: Flight Tests of NACA Jet-Propulsion Exhaust Stacks on the Supermarine Spitfire Airplane. MR (WR L-680), Dec. 1942.
- Pinkel, Benjamin; Turner, L. Richard; Voss, Fred and Humble, Leroy V.: Exhaust-Stack Nozzle Area and Shape for Individual Cylinder Exhaust-Gas Jet-Propulsion System. Rept. 765, 1943.
- Sanders, Newell D. and Barnett, Henry C.: Effect of Varying Percentages of Exhaust Gas on Engine Performance. RB 3D27 (WR E-120), April 1943.
- Pinkel, Benjamin: Effect of Exhaust Back Pressure on Engine Power. CB 3F17 (WR E-116), June 1943.
- Marquardt, R. E.: A Theoretical and Experimental Investigation of Exhaust Ejectors for Cooling at Low Speeds. ACR 3G05, July 1943.
- Marquardt, R. E.: Tests of an Annular Ejector System for Cooling Aircraft Engines. ACR 3J27, Oct. 1943.
- Turner, L. Richard and Desmon, Leland G.: Performance of "Blowdown" Turbine Driven by Nine-Cylinder Radial Engine. Rept. 786, 1944.
- Turner, L. Richard and Humble, Leroy V.: Flame-Visibility Tests with Individual Exhaust Stacks. ARR 4B08 (WR E-147), Feb. 1944.
- Manganiello, Eugene J. and Bogatsky, Donald: An Experimental Investigation of Rectangular Exhaust-Gas Ejectors Applicable for Engine Cooling. ARR E4E31, May 1944.
- Hannum, Richard W. and Zimmerman, Richard H.: Calculations of the Economy of an 18-Cylinder Radial Aircraft Engine with an Exhaust-Gas Turbine Geared to the Crankshaft at Cruising Speed. Rept. 822, 1945.
- Hall, Eldon W.: A Theoretical Analysis of the Performance of a Diesel Engine-Compressor-Turbine Combination for Aircraft. ACR E5D10 (WR E-31), April 1945.

- Sanders, J. C. and Mendelson, Alexander:
 Calculations of the Performance of a
 Compression-Ignition Engine-Compressor Turbine Combination. I Performance of a Highly Supercharged
 Compression-Ignition Engine. ARR
 E5K06 (WR E-234), Dec. 1945.
- McCoy, J. Arnold and Szel, Frank: Computed Performance of a Composite Engine Based on Experimental Data for a Single-Cylinder Conventional Aircraft Engine Converted to Compression-Ignition Operation. RM E7B03, Feb. 1947.
- Boman, David S.; Nagey, Tibor F. and Doyle, Ronald B.: Effect of Exhaust Pressure on the Performance of an 18-Cylinder Air-Cooled Radial Engine with a Valve Overlap of 40°. TN 1220, March 1947.
- Humble, Leroy V.; Nagey, Tibor F. and Boman, David S.: The Effect of Exhaust Pressure on the Performance of an 18-Cylinder Air-Cooled Radial Engine with a Valve Overlap of 62°. TN 1232, March 1947.
- Zinner, K.: The Combination of Internal-Combustion Engine and Gas Turbine. TM 1141, April 1947.
- Desmon, Leland G. and Doyle, Ronald B.:
 Effect of Exhaust Pressure on the
 Performance of a 12-Cylinder LiquidCooled Engine. TN 1367, July 1947.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Type of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- Turner, L. Richard and Noyes, Robert N.:
 The Performance of a Composite Engine Consisting of a Reciprocating Spark-Ignition Engine, a Blowdown Turbine, and a Steady-Flow Turbine.
 TN 1447, Sept. 1947.
- Kaufman, Samuel J. and Boman, David S.:
 Comparison of Computed Performance
 of Composite Power Plants Using 18Cylinder Aircraft Engines with 62°
 and 40° Valve Overlap. TN 1500,
 Jan. 1948.
- Boman, David S. and Kaufman, Samuel J.: Effect of Reducing Valve Overlap on Engine and Compound-Power-Plant Performance. TN 1612, June 1948.
- Desmon, Leland G. and Sams, Eldon W.:
 Performance of Exhaust-Gas Blowdown
 Turbine and Various Engine Systems
 Using a 12-Cylinder Liquid-Cooled
 Engine. TN 1735, Nov. 1948.

Reciprocating Engines Turbines (Cont.)

GAS GENERATOR-TURBINE ENGINES (3.1.2.3)

- Keenan, Joseph H.; Shapiro, Ascher H.; Kaye, Joseph and Rieke, Carol A.: Systems CET, CEHT, and CETX Analysis of a Power Flant of High Efficiency and Great Overload Capacity. ACR 3H31, Aug. 1943.
- Keenan, Joseph H.; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems PCETJ and PCEHTJ. ACR 4G31, July 1944.
- Keenan, Joseph H.; Shapiro, Ascher H. and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device with a Regenerator System PCETXJ. ACR 5B01, April 1945.
- Hall, Eldon W.: A Theoretical Analysis of the Performance of a Diesel Engine-Compressor-Turbine Combination for Aircraft. ACR E5D10 (WR E-31), April 1945.
- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Sanders, J. C. and Mendelson, Alexander:
 Calculations of the Performance of a
 Compression-Ignition Engine-Compressor Turbine Combination. I Performance of a Highly Supercharged
 Compression-Ignition Engine. ARR
 E5K06 (WR E-234), Dec. 1945.
- Turner, L. Richard; Lowdermilk, Warren H. and Lord, Albert M.: Performance of Hoods for Aircraft Exhaust-Gas Turbines. TN 1149, Nov. 1946.

TURBO-JET ENGINES

(3.1.3)

- Meier, Adolf: Recording Rapidly Changing Cylinder-Wall Temperatures. TM 1013, May 1942.
- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Wilcox, E. C.: Tests of an Adjustable-Area Exhaust Nozzle for Jet-Propulsion Engines. MR E5H16 (WR E-265), Aug. 1945.

- Preston, G. Merritt; Black, Fred O., Jr. and Jagger, James M.: Altitude-Wind-Tunnel Tests of the Bell YP-59A
 Power-Plant Installation. MR E5L17
 (WR E-274), Feb. 1946.
- Hanson, Frederick H., Jr.: Tests of the Jet-Motor Air-Intake Duct System of a 1/4-Scale Stub-Wing Model on a Turbo-Propelled and Jet-Propelled Pursuit Airplane. MR A6A09 (WR A-85), May 1946.
- Pinkel, Benjamin and Karp, Irving M.:

 Performance Charts for a Jet-Propulsion System Consisting of a Compressor, a Combustion Chamber, and a Turbine. ARR E6E14 (WR E-241), June 1946.
- Sanders, Newell D.: Performance Parameters for Jet-Propulsion Engines. TN 1106, July 1946.
- Falk, H.: The Influence of the Jet of a Propulsion Unit on Nearby Wings. TM 1104, Sept. 1946.
- Bohanon, H. R.; Gabriel, David S. and Essig, Robert H.: Jet Diffuser for Simulating Ram Conditions on a Turbojet-Engine Static Test Stand. RM E6K29, Jan. 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part I Standardization of the Computations Relating to the Control of Gas-Turbine Power Plants for Aircraft by the Employment of the Laws of Similarity. TM 1142, April 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part II - Principles of Control Common to Jet, Turbine-Propeller Jet, and Ducted-Fan Jet Power Plants. TM 1143, April 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part III - Control of Jet Engines. TM 1166, May 1947.
- Jones, William L. and Dowman, Harry W.: Investigation of Thrust Augmentation of a 1600-Pound Thrust Centrifugal-Flow-Type Turbojet Engine by Injection of Refrigerants at Compressor Inlets. RM E7G23, Aug. 1947.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Types of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- Wood, George P.: Performance Possibilities of the Turbojet System as a Power Plant for Supersonic Airplanes. RM L7H05a, Sept. 1947.

Turbo-Jet Engines (Cont.)

- Goldstein, Arthur W.: Analysis of the Performance of a Jet Engine from Characteristics of the Components. I Aerodynamic and Matching Characteristics of the Turbine Component Determined with Cold Air. TN 1459, Oct. 1947.
- Hill, Francis U. and Mark, Herman: Performance of Experimental Turbojet-Engine Combustor. I Performance of a One-Eighth Segment of an Experimental Turbojet-Engine Combustor. RM E7J13, April 1948.
- Bogart, Donald; Okrent, David and Turner, L. Richard: Thermodynamic Charts for the Computation of Fuel Quantity Required for Constant-Pressure Combustion with Diluents. TN 1655, July 1948.
- Essig, Robert H.; Bohanon, H. R. and Gabriel, David S.: Jet Diffuser for Simulating Ram-Pressure Conditions on a Turbojet-Engine Static Test Stand. TN 1687, Aug. 1948.
- Dietz, Robert O., Jr. and Suozzi, Frank L.:
 Altitude-Wind-Tunnel Investigation of
 a 4000-Pound-Thrust Axial-Flow
 Turbojet Engine. IV Analysis of
 Compressor Performance. RM
 E8F09c, Aug. 1948.
- Goldstein, Arthur W.; Alpert, Sumner; Beede, William and Kovach, Karl: Analysis of the Performance of a Jet Engine from Characteristics of the Components. II - Interaction of the Components as Determined from Engine Operation. TN 1701, Sept. 1948.
- Sanders, Newell D. and Behun, Michael: Generalization of Turbojet-Engine Performance in Terms of Pumping Characteristics. TN 1927, Aug. 1949.

TURBO-PROPELLER ENGINES

(3.1.4)

- Piening, Werner: The Efficiency of Combustion Turbines with Constant-Pressure Combustion. TM 975, April 1941.
- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Kuhl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part II Principles of Control Common to Jet, Turbine-Propeller Jet, and Ducted-Fan Jet Power Flants. TM 1143, April 1947.

- Kuhl, H.: Preliminary Report on the Fundamentals of the Control of Turbine-Propeller Jet Power Plants. TM 1172, July 1947.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Type of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- English, Robert E. and Hauser, Cavour H.:
 A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.
- Goldstein, Arthur W.; Alpert, Sumner; Beede, William and Kovach, Karl: Analysis of the Performance of a Jet Engine from Characteristics of the Components. II - Interaction of the Components as Determined from Engine Operation. TN 1701, Sept. 1948.
- Heidmann, Marcus F. and Novik, David: Control Considerations for Optimum-Power Proportionment in Turbine-Propeller Engines. TN 1762, Dec. 1948.

DUCTED PROPELLER ENGINES

(3.1.5)

- Piening, Werner: The Efficiency of Combustion Turbines with Constant-Pressure Combustion. TM 975, April 1941.
- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Flants for Aircraft. Fart II - Principles of Control Common to Jet, Turbine-Propeller Jet, and Ducted-Fan Jet Power Plants. TM 1143, April 1947.
- Parisen, Richard B.; Armstrong, John C. and Huntley, Sidney C.: Theoretical Evaluation of the Ducted-Fan Turbojet Engine. TN 1745, Nov. 1948.

PULSE JET

(3.1.6)

- Sanders, J. C.: A Preliminary Evaluation of the Explosion Jet-Propulsion Engine. MR (WR E-243), Aug. 1944.
- Bressman, Joseph R. and McCready, Robert J.: Tests of Air Valves for Intermittent-Jet Engines at Speeds of 20 and 25 Cycles per Second. MR E5E08 (WR E-258), May 1945.

Pulse Jet (Cont.)

- Manganiello, Eugene J.; Valerino, Michael F. and Essig, Robert H.: Sea-Level Performance Tests of Ford MX-544 Intermittent Jet Engine at Various Simulated Ram Pressures. MR E5J02 (WR E-269), Oct. 1945.
- Manganiello, Eugene J.; Valerino, Michael F. and Breisch, John H.: Endurance Tests of Ford MX-544 Intermittent Jet Engine with a Neoprene-Coated Valve Grid. AAF & Bur. Aero. MR E5J03 (WR E-270), Oct. 1945.
- Bressman, Joseph R.: The Effect of a Low-Loss Air Valve on the Performance of the PJ31 Intermittent-Jet Engine. MR E6E15 (WR E-279), June 1946.
- Valerino, Michael F.; Essig, Robert H. and Hughes, Richard F.: The Effect of Increase in Combustion-Air Inlet Temperature from 80° to 130° F on the Sea-Level Performance of the Ford MX-544 Intermittent-Jet Engine. MR E6G01 (WR E-283), July 1946.
- Schultz-Grunow, F.: Gas-Dynamic Investigations of the Pulse-Jet Tube. Parts I and II. TM 1131, Feb. 1947.
- Zipkin, Morris A. and Lewis, George W., Jr.: Analytical and Experimental Performance of an Explosion-Cycle Combustion Chamber for a Jet-Propulsion Engine. TN 1702, Sept. 1948.
- Hess, Robert V.: Study of Unsteady Flow Disturbances of Large and Small Amplitudes Moving Through Supersonic or Subsonic Steady Flows. TN 1878, May 1949.
- Huber, Paul W.; Fitton, Cliff E., Jr. and Delpino, F.: Experimental Investigation of Moving Pressure Disturbances and Shock Waves and Correlation with One-Dimensional Unsteady-Flow Theory. TN 1903, July 1949.

RAM JET

(3.1.7)

- Forthmann, E.: Turbulent Jet Expansion. TM 789, March 1936.
- Becker, John V. and Baals, Donald D.: Analysis of Heat and Compressibility Effects in the Internal Flow Systems and High-Speed Tests of a Ram-Jet System. Rept. 773, 1943.
- Rubert, Kennedy F.: An Analysis of Jet-Propulsion Systems Making Direct Use of the Working Substance of a Thermodynamic Cycle. ACR L5A30a (WR L-714), Feb. 1945.

- Hill, Paul R.: Parameters Determining Performances of Supersonic Pilotless Airplanes Powered by Ram-Compression Power Plants. ACR L6D17, June 1946.
- Sanger, E. and Bredt, I.: A Ram-Jet Engine for Fighters. TM 1106, July 1946.
- Sanders, J. C. and Sanders, N. D.: A Preliminary Study of a Propeller Powered by Gas Jets Issuing from the Blade Tips. TN 1155, Nov. 1946.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Types of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- Sanger, E. and Bredt, J.: A Ram-Jet Engine for Fighters. TM 1106, Oct. 1947.
- Hess, Robert V.: Study of Unsteady Flow Disturbances of Large and Small Amplitudes Moving Through Supersonic or Subsonic Steady Flows. TN 1878, May 1949.

ROCKETS

(3.1.8)

- Roy, Maurice: Propulsion by Reaction. TM 571, June 1930.
- Williams, David T.: The Reaction Jet as a Means of Propulsion at High Speeds. ACR (WR E-78), June 1941.
- Sanger, Eugen: Recent Results in Rocket Flight Technique. TM 1012, April 1942.
- Busemann, Adolph: Rocket Using Liquid Oxygen. TM 1144, April 1947.
- Zborowski, Helmut: Rocket Power Plants Based on Nitric Acid and Their Specific Propulsive Weights. TM 1145, May 1947.
- Walter, Hellmuth: Report on Rocket Power Plants Based on T-Substance. TM 1170, July 1947.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Types of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- Ivey, H. Reese; Bowen, Edward N., Jr. and Oborny, Lester F.: Introduction to the Problem of Rocket-Powered Aircraft Performance. TN 1401, Dec. 1947.
- Neihouse, Anshal I.: Spin-Tunnel Investigation to Determine the Effectiveness of a Rocket for Spin Recovery. TN 1866, April 1949.

Rockets (Cont.)

Höhler, P. and von Köppen, I.: Experimental Flights for Testing of a Reactor as an Expedient for the Termination of Dangerous Spins. TM 1221, July 1949.

JET-DRIVEN ROTORS

(3.1.9)

Sanders, J. C. and Sanders, N. D.: A Preliminary Study of a Propeller Powered by Gas Jets Issuing from the Blade Tips. TN 1155, Nov. 1946.

COMPARISON OF ENGINE TYPES

(3.1.10)

- Schwager, Otto: Recent Efforts and Experiments in the Construction of Aviation Engines. TN 12, Sept. 1920.
- Seppeler, E.: The Past and Future Evolution of Aviation Engines. MP-3, April 1921.
- Hamel, M.: Type of Engine to Employ. TM 160, Nov. 1922.
- Fedden, A. H.: Fixed Air-Cooled Engines. TM 185, Feb. 1923.
- Wilson, E. E.: Aircraft Engine Design. TN 211, Jan. 1925.
- Fliedner, C. S.: Condensed Data on the Aircraft Engines of the World. TN 303, April 1929.
- de Caria, Ugo: Airplane Flight in the Stratosphere. TM 660, Feb. 1932.
- Turner, L. Richard: Consideration of Auxiliary Jet Propulsion for Assisting Take-Off. ACR (WR E-49), May 1940.
- Keenan, Joseph H.; Kaye, Joseph; Rieke, Carol A. and Morrisson, Reeves: The Calculated Performance of Certain Jet Propulsion Devices. ACR 3D29, April 1943.
- Pinkel, Benjamin: Effect of Exhaust Back Pressure on Engine Power. CB 3F17 (WR E-116), June 1943.
- Keenan, Joseph H.; Shapiro, Ascher H.; Kaye, Joseph and Rieke, Carol A.: Systems CET, CEHT, and CETX Analysis of a Power Plant of High Efficiency and Great Overload Capacity. ACR 3H31, Aug. 1943.

- Keenan, Joseph H.; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems PCETJ and PCEHTJ. ACR 4G31, July 1944.
- Rubert, Kennedy F.: An Analysis of Jet-Propulsion Systems Making Direct Use of the Working Substance of a Thermodynamic Cycle. ACR L5A30a (WR L-714), Feb. 1945.
- Keenan, Joseph H.; Shapiro, Ascher H. and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device with a Regenerator System PCETXJ. ACR 5B01, April 1945.
- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Wood, George P.: Analytical Investigation of the Use of Regeneration in Compressor-Turbine-Propeller Systems. RM L6109, Sept. 1946.
- Humble, Leroy V.; Nagey, Tibor F. and Boman, David S.: The Effect of Exhaust Pressure on the Performance of an 18-Cylinder Air-Cooled Radial Engine with a Valve Overlap of 62 degrees. TN 1232, March 1947.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Types of Aircraft-Propulsion System. TN 1349, Aug. 1947.
- English, Robert E. and Hauser, Cavour H.:
 A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants
 Driving Propellers. TN 1497, Jan.
 1948.
- Desmon, Leland G. and Doyle, Ronald B.: Calculated Performance of 12-Cylinder Liquid-Cooled Engine with Exhaust-Gas Turbine Geared to Crankshaft. TN 1602, June 1948.
- Desmon, Leland G. and Sams, Eldon W.:
 Performance of Exhaust-Gas Blowdown
 Turbine and Various Engine Systems
 Using a 12-Cylinder Liquid-Cooled
 Engine. TN 1735, Nov. 1948.
- Parisen, Richard B.; Armstrong, John C. and Huntley, Sidney C.: Theoretical Evaluation of the Ducted-Fan Turbojet Engine. TN 1745, Nov. 1948.

MISCELLANEOUS ENGINES

(3.1.11)

Noack, W. G.: Tests of the Daimler D-IVa Engine at a High Altitude Test Bench. TN 15, Oct. 1920.

- Miscellaneous Engines (Cont.)
- Anon.: The Goebel Rotary Engines. TM 11, March 1921.
- Seppeler, E.: The Past and Future Evolution of Aviation Engines. MP-3, April 1921.
- Buckingham, Edgar: Jet Propulsion for Airplanes. Rept. 159, Oct. 1923.
- Kutzbach, K.: Adaptation of Aeronautical Engines to High Altitude Flying. TN 142, May 1923.
- Anon: Rules and Regulations for Endurance Contest of Aviation Engines. (Under the Auspicies of the Aero Club of France.) TM 240, Nov. 1923.
- Lehr, G.: Aviation Engines in the Endurance Contest. TM 290, Dec. 1924.
- Wilson, E. E.: Steam Power Plants in Aircraft. TN 239, June 1926.
- Anon.: Comments on Crankless Engine Types. TM 462, May 1928.
- Keenan, Joseph H.; Kaye, Joseph; Rieke, Carol A. and Morrisson, Reeves: The Calculated Performance of Certain Jet Propulsion Devices. ACR 3D29, April 1943.
- Keenan, Joseph H.; Shapiro, Ascher H.; Kaye, Joseph and Rieke, Carol A.: Systems CET, CEHT, and CETX Analysis of a Power Plant of High Efficiency and Great Overload Capacity. ACR 3H31, Aug. 1943.

- Pinkel, Benjamin and Hall, Eldon W.: Study of Jet-Propulsion System Comprising Blower, Burner, and Nozzle. ACR E4E06 (WR E-212), May 1944.
- Keenan, Joseph H.; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems PCETJ and PCEHTJ. ACR 4G31, July 1944.
- Waldron, C. D. and Biermann, A. E.:
 Method of Mounting Cylinder Blocks
 of In-Line Engines on CUE Crankcases. RB E4G27 (WR E-27), July
 1944.
- Keenan, Joseph H.; Shapiro, Ascher H. and Rieke, Carol A.: The Calculated Performance of a Jet Fropulsion Device with a Regenerator System PCETXJ. ACR 5B01, April 1945.
- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Sanders, J. C. and Sanders, N. D.: A Preliminary Study of a Propeller Powered by Gas Jets Issuing from the Blade Tips. TN 1155, Nov. 1946.
- Parisen, Richard B.; Armstrong, John C. and Huntley, Sidney C.: Theoretical Evaluation of the Ducted-Fan Turbojet Engine. TN 1745, Nov. 1948.

Charging and Control of Engines

(3.2)

- Heald, R. H.: Performance of a Vane-Driven Gear Pump. TN 61, Sept. 1921.
- Schwager, O.: Behavior of Aviation Engines at Different Air Densities. TM 60, Jan. 1922.
- Diehl, Walter S.: Engine Performance and the Determination of Absolute Ceiling. Rept. 171, 1923.
- Anon.: "AM" Gasoline Cock. Manufactured by E. Martin, Oullings, France. TM 192, Feb. 1923.
- Kutzbach, K.: Adaptation of Aeronautical Engines to High Altitude Flying. TN 142, May 1923.
- Raffaelli, Italo: Effect of Altitude on Power of Aviation Engines. TM 287, Nov. 1924.
- Du Bois, R. N.: The Testing of Aviation Engines Under Approximate Altitude Conditions. TN 210, Dec. 1924.
- Schey, Oscar W. and Rollin, Vern G.: The Effect of Increased Carburetor Pressure on Engine Performance at Several Compression Ratios. Rept. 404, 1931.
- Gerrish, Harold C. and Ayer, Bruce E.: Influence of Fuel-Oil Temperature on the Combustion in a Prechamber Compression-Ignition Engine. TN 565, April 1936.
- Ragazzi, Paolo: The Power of Aircraft Engines at Altitude. TM 895, May 1939.
- Biermann, David and Conway, Robert N.:
 Propeller Charts for the Determination
 of the Rotational Speed for the Maximum Ratio of the Propulsive Efficiency
 to the Specific Fuel Consumption. Rept.
 749, 1942.
- Katzoff, S.: High-Altitude Cooling. V Cowling and Ducting. ARR L4I11d (WR L-775), Sept. 1944.
- NACA Subcommittee on Supercharger Compressors: Standard Procedures for Rating and Testing Centrifugal Compressors. ARR E5F13 (WR E-6), Aug. 1945.

NACA Subcommittee on Supercharger Compressors: Standard Method of Graphical Presentation of Compressor Performance. ARR E5F13a (WR E-4), Aug. 1945.

RECIPROCATING ENGINES

(3.2.1)

- Schwager, Otto: Notes on the Design of Super-charged and Overdimensioned Aircraft Engines. TN 7, July 1920.
- Schwager, Otto: Recent Efforts and Experiments in the Construction of Aviation Engines. TN 12, Sept. 1920.
- Noack, W. G.: Tests of the Daimler D-IVa Engine at a High Altitude of Test Bench. TN 15, Oct. 1920.
- Kemble, E. C.: The Calculated Performance of Airplanes Equipped with Supercharging Engines. I The Calculation of Performance Curves for an Airplane Engine Fitted with a Supercharging Centrifugal Compressor. II The Calculation of Airplane Performance from the Estimated Performance Curves of Engine and Compressor. Rept. 101, 1921.
- Noack, W. G.: Airplane Superchargers. TN 48, May 1921.
- Ziembinske, S.: Possible Improvements in Gasoline Engines. TM 182, Jan. 1923.
- Kutzbach, K.: Results of Experimental Flights at High Altitudes with Daimler, Benz, and Maybach Engines to Determine Mixture Formation and Heat Utilization of Fuel. TN 125, Jan. 1923.
- Sparrow, Stanwood W.: Correcting Horsepower Measurements to a Standard Temperature. Rept. 190, 1924.
- Matthews, Robertson and Gardiner, Arthur W.: Increasing the Compression Pressure in an Engine by Using a Long Intake Pipe. TN 180, Feb. 1924.
- Hesselman, K. J. E.: Hesselman Heavy-Oil High-Compression Engine. TM 312, April 1925.

- Reciprocating Engines (Cont.)
- Prayer, Georg: Increasing the Power of Internal Combustion Engines. TM 321, July 1925.
- Eck, Bruno: Potential Flow in Engine Valves. TM 343, Dec. 1925.
- Sparrow, Stanwood W.: The Effect of Changes in Compression Ratio upon Engine Performance. Rept. 205, 1926.
- Paton, C. R. and Kemper, Carlton: Power Output and Air Requirements of a Two-Stroke Cycle Engine for Aeronautical Use. Rept. 239, 1926.
- Jalbert, J.: Two-Stroke-Cycle Engines for Airplanes. TM 347, Jan. 1926.
- Buchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part I A General Discussion of the Subject of Fuel Injection in Diesel Engines and Detailed Descriptions of Many Types of Injection Nozzles. TM 356, April 1926.
- Buchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part II - A Discussion of the Semi-Diesel Principle and its Application to Various Types of Solid-Injection Engines. TM 357, April 1926.
- Kemper, Carlton: Improving the Performance of a Compression Ignition Engine by Directing Flow of the Inlet Air. TN 242, July 1926.
- Ware, Marsden: Description and Laboratory Tests of a Roots Type Aircraft Engine Supercharger. Rept. 230, 1927.
- Gardiner, Arthur W. and Reid, Elliott G.: Preliminary Flight Tests of the NACA Roots Type Aircraft Engine Supercharger. Rept. 263, 1927.
- Gardiner, Arthur W. and Whedon, William E.: The Relative Performance Obtained with Several Methods of Control of an Overcompressed Engine Using Gasoline. Rept. 272, 1927.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. I Engines with External Atomization of the Fuel. Engines with Internal Atomization of the Fuel. Hot-Bulb Engines. Diesel Engines. TM 397, Feb. 1927.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part II. TM 403, March 1927.
- Ware, Marsden and Schey, Oscar W.: A Preliminary Investigation of Supercharging an Air-Cooled Engine in Flight. Rept. 283, 1928.

- Holm, Otto: Crank Case Scavenging of a Two-Stroke-Cycle Engine. TM 446, Jan. 1928.
- Schey, O. W. and Gove, W. D.: The Effect of Supercharger Capacity on Engine and Airplane Performance. Rept. 327, 1929.
- Capetti, Antonio: Effect of Intake Pipe on the Volumetric Efficiency of an Internal Combustion Engine. TM 501, Feb. 1929.
- List, Hans: Crank Case Scavenging of Two-Stroke-Cycle Engines. TM 516, June 1929.
- Schey, Oscar W. and Young, Alfred W.: Comparative Flight Performance with an NACA Roots Supercharger and a Turbocentrifugal Supercharger. Rept. 355, 1930.
- Schey, Oscar W.: The Comparative Performance of Superchargers. Rept. 384, 1931.
- Schey, Oscar W. and Biermann, Arnold E.: The Effect of Valve Timing upon the Performance of a Supercharged Engine at Altitude and an Unsupercharged Engine at Sea Level. Rept. 390, 1931.
- Theodorsen, Theodore and Freeman, Ira M.: The Elimination of Fire Hazard Due to Back Fires. Rept. 409, 1931.
- Léglise, Pierre: Superchargers. TM 631, July 1931.
- Spanogle, J. A. and Moore, C. S.: Performance of a Compression-Ignition Engine with a Precombustion Chamber Having High-Velocity Air Flow. TN 396, Oct. 1931.
- Gelalles, A. G. and Marsh, E. T.: Rates of Fuel Discharge as Affected by the Design of Fuel-Injection Systems for Internal-Combustion Engines. Rept. 433, 1932.
- Haenlein, A.: Disintegration of a Liquid Jet. TM 659, Feb. 1932.
- Schey, Oscar W. and Young, Alfred W.: The Use of Large Valve Overlap in Scavenging a Supercharged Spark-Ignition Engine Using Fuel Injection. TN 406, April 1932.
- Spanogle, J. A. and Moore, C. S.: Considerations of Air Flow in Combustion Chambers of High-Speed Compression-Ignition Engines. TN 414, April 1932.
- Spanogle, J. A.; Hicks, C. W. and Foster, H. H.: Increasing the Air Charge and Scavenging the Clearance Volume of a Compression-Ignition Engine. Rept. 469, 1933.

- Reciprocating Engines (Cont.)
- List, Hans: Increasing the Volumetric Efficiency of Diesel Engines by Intake Pipes. TM 700, March 1933.
- Rothrock, A. M. and Spencer, R. C.: Effect of Moderate Air Flow on the Distribution of Fuel Sprays After Injection Cut-Off. Rept. 483, 1934.
- Spanogle, J. A. and Whitney, E. G.: A Description and Test Results of a Spark-Ignition and a Compression-Ignition 2-Stroke-Cycle Engine. Rept. 495, 1934.
- Venediger, Herbert J.: Evaluation of Scavenging in Two-Stroke-Cycle En-gines. TM 732, Jan. 1934.
- Oestrich, Hermann: Investigation of a Rateau Supercharger for a 700-Horse-power Airplane Engine. TM 738, March 1934.
- Venediger, Herbert J.: A Discussion of the Several Types of Two-Stroke-Cycle Engines. TM 776, Sept. 1935.
- Gerrish, Harold C. and Voss, Fred: Mixture Distribution in a Single-Row Radial Engine. TN 583, Oct. 1936.
- Earle, Sherod L. and Dutee, Francis J.: Effect of Air-Entry Angle on Performance of a 2-Stroke-Cycle Compression-Ignition Engine. TN 610, Aug. 1937.
- Von der Nüll, Werner: The Design of Airplane-Engine Superchargers. TM 839, Oct. 1937.
- Kurtz, Oskar: Research and Design Problems Introduced by Increased Power Output. TM 840, Oct. 1937.
- Moore, Charles S. and Collins, John H., Jr.: Compression-Ignition Engine Performance at Altitudes and at Various Air Pressures and Temperatures. TN 619, Nov. 1937.
- Petersen, Hans: Investigation of Ignition and Combustion Processes of Diesel Engines Operating with Turbulence and Air-Storage Chambers. TM 857, April 1938.
- Rogowski, A. R. and Bouchard, C. L.: Scavenging a Piston-Ported Two-Stroke Cylinder. TN 674, Nov. 1938.
- Lee, Dana W.: A Study of Air Flow in an Engine Cylinder. Rept. 653, 1939.
- Reynolds, Blake; Schecter, Harry and Taylor, E. S.: The Charging Process in a High-Speed Single-Cylinder, Four-Stroke Engine. TN 675, Feb. 1939.

- Schey, Oscar W. and Clark, J. Denny: Comparative Performance of Engines Using a Carburetor, Manifold Injection, and Cylinder Injection. TN 688, Feb. 1939.
- Waldron, C. D.: Intermittent-Flow Coefficients of a Poppet Valve. TN 701, April 1939.
- Zeman, J.: Two-Stroke-Cycle Engines with Un-Symmetrical Control Diagram (Supercharged Engines). TM 908, Sept.
- Wenger, Hermann: Measurement of the Air-Flow Velocity in the Cylinder of an Airplane Engine. TM 923, Dec. 1939.
- Von der Nüll, W.: The Maximum Delivery Pressure of Single-Stage Radial Superchargers for Aircraft Engines. TM 949, Aug. 1940.
- Lutz, O.: Resonance Vibrations in Intake and Exhaust Pipes of In-Line Engines. III - The Inlet Process of a Four-Stroke-Cycle Engine. TM 957, Oct. 1940.
- Waldron, C. D.: Flow Coefficients of Monosleeve Valves. Rept. 717, 1941.
- Buck, Richard S.: Two-Stage Supercharging. TN 794, Feb. 1941.
- Wasielewski, Eugene W. and King, J. Austin: Effect of Several Supercharger Control Methods on Engine Performance. TN 795, Feb. 1941.
- Lutz, O.: Use of Charts for Flow Discharge Calculations. TM 972, March 1941.
- Sarracino, Marcello: New Method of Calculating the Power at Altitude of Aircraft Engines Equipped with Superchargers on the Basis of Tests Made Under Sea-Level Conditions. TM 981. July 1941.
- Young, Alfred W.: Investigation of Performance of 9-Cylinder Engine Using Large Valve Overlap and Eclipse Fuel-Injection System. ARR (WR E-52), Nov. 1941.
- Schweitzer, P. H. and DeLuca, Frank, Jr.: The Tracer Gas Method of Determining the Charging Efficiency of Two-Stroke-Cycle Diesel Engines. TN 838, Jan. 1942.
- Forbes, J. E. and Taylor, E. S.: Rise in Temperature of the Charge in Its Passage Through the Inlet Valve and Port of an Air-Cooled Aircraft Engine Cylinder. TN 839, Jan. 1942.

- Reciprocating Engines (Cont.)
- Gilbert, Mitchell: Effect of Aromatics and Spark Advance on Thermal Efficiency. ARR (WR E-99), Sept. 1942.
- Kimball, Leo B.: Icing Tests of Aircraft-Engine Induction Systems. ARR (WR W-97), Jan. 1943.
- Cook, Harvey A. and Olson, Walter T.: Small-Orifice Tubes for Minimizing Dilution in Exhaust-Gas Samples. ARR (WR E-137), Feb. 1943.
- Sanders, Newell D. and Barnett, Henry C.: Effect of Varying Percentages of Exhaust Gas on Engine Performance. RB 3D27 (WR E-120), April 1943.
- Livengood, James C. and Stanitz, John D.: The Effect of Inlet-Valve Design, Size, and Lift on the Air Capacity and Output of a Four-Stroke Engine. TN 915, Nov. 1943.
- Rogowski, A. R. and Taylor, C. Fayette: Part-Throttle Operation and Control of a Piston-Ported Two-Stroke Cylinder. TN 919, Nov. 1943.
- Rubert, K. F.; Corson, Blake W., Jr. and Nielsen, Jack: The Advantages of Uniform Fuel Distribution for Air-Cooled Engines from Considerations of Cooling Requirements and Fuel Economy. CB 3L07 (WR L-338), Dec. 1943.
- Boden, R. H. and Schecter, Harry: Dynamics of the Inlet System of a Four-Stroke Engine. TN 935, May 1944.
- Voglewede, T. J.: A Proposed Method of Measuring Engine Charge Air Flow in Flight. CB L4E25 (WR L-200), May
- White, H. Jack and Engelman, Helmuth W.:

 Effect of Fuel Volatility on Performance of a Wright R-2600-8 Engine as
 Influenced by Mixture Distribution.

 ARR E4105 (WR E-87), Sept. 1944.
- Nielsen, Jack N.: High-Altitude Cooling. III - Radiators. ARR L4I11b (WR L-773), Sept. 1944.
- Rubert, K. F.: High-Altitude Cooling. IV - Intercoolers. ARR L4I11c (WR L-774), Sept. 1944.
- Brun, Rinaldo J.; Olsen, H. Lowell and Miller, Cearcy D.: End-Zone Water Injection as a Means of Suppressing Knock in a Spark-Ignition Engine. RB E4I27 (WR E-72), Cept. 1944.
- Marble, Frank E.; Ritter, William K. and Miller, Mahlon A.: Effect of the NACA Injection Impeller on the Mixture Distribution of a Double-Row Radial Aircraft Engine. Rept. 821, 1945.

- Livengood, James C. and Eppes, James V. D.: Effect of Changing the Stroke on Air Capacity, Power Output, and Detonation on a Single-Cylinder Engine. ARR 4E24 (WR W-50), Feb. 1945.
- Peters, Max D.: Effect of Increasing the Size of the Valve-Guide Boss on the Exhaust-Valve Temperature and the Volumetric Efficiency of an Aircraft Cylinder. ARR E5A31 (WR E-61), Feb. 1945.
- King, J. Austin and Klein, Harold: Performance Characteristics of a Junkers Jumo 211F Engine Supercharger with a DVL Fully Shrouded Impeller and Scroll Diffuser. ARR £5B03 (WR E-3), Feb. 1945.
- Dallas, Thomas; Hoss, Gene and Harries, Myron L.: A Preignition Indicator for Aircraft Engines. RB E5A31 (WR E-40), Feb. 1945.
- Bailey, F. J., Jr. and Voglewede, T. J.: An Estimate of the Effect of Engine Supercharging on the Take-Off Thrust of a Typical Helicopter at Different Altitudes and Temperatures. TED No. NACA 1301. MR L5C12b (WR L-592), March 1945.
- Cook, Harvey A.; Richard, Paul H. and Brown, Kenneth D.: The Effect of Valve Clearance on Knock-Limited Performance and Engine Cooling. MR E5D18 (WR E-189), April 1945.
- Cook, Harvey A. and Brightwell, Virginia L.: Relation Between Fuel Economy and Crank Angle for the Maximum Rate of Pressure Rise. MR E5E21 (WR E-179), May 1945.
- Moses, Jason J.: Effect of Various Carburetor Throttle Settings on the Flow Characteristics at the Outlet of a Supercharger Inlet Elbow. ARR E5E19a (WR E-73), June 1945.
- Baas, Edmund J.; Monroe, William R. and Mesrobian, John M.: Air-Flow and Performance Characteristics of the Engine-Stage Supercharger of the Wright R-3350-21 Engine. Part I Effect of Operating Variables. MR E5H28 (WR E-266), Aug. 1945.
- Guentert, Donald C. and Baas, Edmund J.:
 The Effect of Carburetor Throttle Settings on the Velocity Distribution at the Outlet of a Vaned and a Vaneless Supercharger Inlet Elbow. ARR E5G23 (WR E-108), Sept. 1945.
- Marble, Frank E.; Butze, Helmut F. and Hickel, Robert O.: Study of the Mixture Distribution of a Double-Row Radial Aircraft Engine. ARR E5I05 (WR E-47), Oct. 1945.

- Reciprocating Engines (Cont.)
- Lyons, Richard E. and Coles, Willard D.:
 Laboratory Investigation of Icing in the
 Carburetor and Supercharger Inlet
 Elbow of the Lockheed P-38J Airplane.
 III Heated Air as a Means of De-Icing
 the Carburetor and Inlet Elbow. MR
 E5L19 (WR E-172), Dec. 1945.
- Chapman, G. E. and Zlotowski, E. D.:
 Laboratory Investigation of Icing in the
 Carburetor and Supercharger Inlet
 Elbow of the Lockheed P-38J Airplane.
 IV Effect of Throttle Designs and
 Method of Throttle Operation on Induction-System Icing Characteristics.
 MR E5L27 (WR E-173), Jan. 1946.
- Stanitz, John D.; Lucia, Robert E. and Massele, Francis L.: Steady- and Intermittent-Flow Coefficients of Poppet Intake Valves. TN 1035, March 1946.
- Guentert, Donald C. and Ferkan, John G.: Charge-Air Distribution Among the Cylinders of the R-3350 Engine. MR E6F27 (WR E-282), July 1946.
- Chapman, Gilbert E.: A Preliminary Investigation of the Icing Characteristics of the Chandler-Evans 58 CPB-4 Carburetor. MR E6G11 (WR E-284), July 1946.
- Holms, Arthur G. and Faldetta, Richard D.: Strain-Gage Study of Internally Cooled Exhaust Valves Having Various Throat Designs. TN 1116, Aug. 1946.
- Guentert, D. C.; Todd, D. J. and Simmons, W. P., Jr.: Flow Tests of an NACA-Designed Supercharger Inlet Elbow and the Effects of Various Components on the Flow Characteristics at the Elbow Outlet. TN 1148, Oct. 1946.
- Kohl, Robert C. and Diggs, Donald R.: Effect of Various Methods of Boundary Layer Control on Performance of V-1710-93 Engine-Stage Supercharger. RM E6L19, Jan. 1947.
- Cook, Harvey A.; Heinicke, Orville H. and Haynie, William H.: Spark-Timing Control Based on Correlation of Maximum-Economy Spark Timing, Flame-Front Travel, and Cylinder Pressure Rise. TN 1217, Feb. 1947.
- Denkmeier, H. and Gross, K.: Description of Russian Aircraft Engines "AM 35" and "AM 38." TM 1169, June 1947.
- Coles, Willard D.: Laboratory Investigation of Ice Formation and Elimination in the Induction System of a Large Twin-Engine Cargo Aircraft. TN 1427, Sept. 1947.

- Creagh, John W. R.; Hartmann, Melvin J. and Arthur, W. Lewis, Jr.: An Investigation of Valve-Overlap Scavenging over a Wide Range of Inlet and Exhaust Pressures. TN 1475, Nov. 1947.
- Livengood, James C. and Eppes, James V. D.: Effect of Changing Manifold Pressure, Exhaust Pressure, and Valve Timing on the Air Capacity and Output of a Four-Stroke Engine Operated with Inlet Valves of Various Diameters and Lifts. TN 1366, Dec. 1947.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.
- Tsu, Tsung-chi: Theory of the Inlet and Exhaust Processes of Internal-Combustion Engines. TN 1446, Jan. 1949.

METERING AND CONTROL PARAMETERS (3.2.1.1)

- Tice, Percival S.: Carbureting Conditions Characteristic of Aircraft Engines. Rept. 48, 1920.
- Tice, Percival S. and Dickinson, H. C.: Metering Characteristics of Carburetors. Rept. 49, 1920.
- Sparrow, Stanwood W.: The Use of Multiplied Pressures for Automatic Altitude Adjustments. TN 108, Aug. 1922.
- Anon.: Graetzin Special Carburetor. TM 189, Feb. 1923.
- Poincare: Carburetion in Aviation Engines. TM 225, Aug. 1923.
- Matthews, Robertson and Gardiner, A. W.:
 The Time Lag and Interval of Discharge with a Spring Actuated Fuel Injection Pump. TN 159, Sept. 1923.
- Sparrow, Stanwood W.: Correcting Horsepower Measurements to a Standard Temperature. Rept. 190, 1924.
- Praetorius, K. R. H.: The Problem of Fuel Measurement (the Schiske "Konsummeter"). TM 315, May 1925.
- Joachim, W. F.: An Investigation of the Coefficient of Discharge of Liquids Through Small Round Orifices. Rept. 224, 1927.
- Beardsley, E. G.: Some Factors Affecting the Reproducibility of Penetration and the Cut-Off of Oil Sprays for Fuel-Injection Engines. Rept. 258, 1928.
- Gelalles, A. G. and Rothrock, A. M.: Experimental and Analytical Determination of the Motion of Hydraulically Operated Valve Stems in Oil Engine Injection Systems. Rept. 330, 1928.

- Metering Reciprocating Engines (Cont.)
- Bassu, Jatindra Nath: Contribution to the Design and Calculation of Fuel Cams and Fuel Valves for Diesel Engines. TM 477, Aug. 1928.
- Sauter, J.: Investigation of Atomization in Carburetors. TM 518, June 1929.
- Joachim, William F.; Hicks, Chester W. and Foster, Hampton H.: The Design and Development of an Automatic Injection Valve with an Annular Orifice of Varying Area. Rept. 341, 1930.
- Spanogle, J. A. and Foster, H. H.: Performance of a High-Speed Compression-Ignition Engine Using Multiple Orifice Fuel Injection Nozzles. TN 344, June 1930.
- Gelalles, A. G.: Coefficients of Discharge of Fuel Injection Nozzles for Compression-Ignition Engines. Rept. 373, 1931.
- Gelalles, A. G.: Effect of Orifice Length-Diameter Ratio on Fuel Sprays for Compression-Ignition Engines. Rept. 402, 1931.
- Gelalles, A. G. and Marsh, E. T.: Effect of Orifice Length-Diameter Ratio on the Coefficient of Discharge of Fuel-Injection Nozzles. TN 369, March 1931.
- Spanogle, J. A. and Foster, H. H.: Basic Requirements of Fuel-Injection Nozzles for Quiescent Combustion Chambers. TN 382, June 1931.
- Rothrock, A. M.: The NACA Apparatus for Studying the Formation and Combustion of Fuel Sprays and the Results from Preliminary Tests. Rept. 429, 1932.
- Castleman, R. A., Jr.: The Mechanism of Atomization Accompanying Solid Injection. Rept. 440, 1932.
- Rothrock, A. M. and Waldron, C. D.: Some Effects of Injection Advance Angle, Engine-Jacket Temperature, and Speed on Combustion in a Compression-Ignition Engine. Rept. 525, 1935.
- Lubenetsky, W. S.: Details of the Construction and Production of Fuel Pumps and Fuel Nozzles for the Airplane Diesel Engine. TM 803, Sept. 1936.
- Wasielewski, Eugene W. and King, J. Austin: Effect of Several Supercharger Control Methods on Engine Performance. TN 795, Feb. 1941.
- Tuscher, Jean E.: Direct Injection in Internal-Combustion Engines. TM 993, Nov. 1941.

- Shames, Sidney J.: Air-Consumption
 Parameters for Automatic Mixture
 Control of Aircraft Engines. Rept.
 804, 1945.
- Scharer, M. E. and Addie, A. N.: Characteristics of the BMW 801D2 Automatic Engine Control as Determined from Bench Tests. MR E5D19 (WR E-192), April 1945.
- Biermann, Arnold E.; Miller, George R. and Henneberry, Hugh M.: Economy of Internally Cooling Only the Overheated Cylinders of Aircraft Engines. MR E5G14 (WR E-202), July 1945.
- Biermann, Arnold E.; Henneberry, Hugh M. and Miller, George R.: Control of Cylinder Temperatures by Thermostatically Operated Internal-Coolant Valves. MR E5G16 (WR E-200), July 1945.
- Shames, Sidney J. and Howes, William: Determination of Air-Consumption Parameters for Two Radial Aircraft Engines. MR E5H21 (WR E-193), Aug. 1945.
- Otto, Edward W.: Analysis of Altitude Compensation Systems for Aircraft Carburetors. TN 1874, May 1949.

MIXTURE CONTROLS (3.2.1.2)

- Lucke, Charles Edward, assisted by Willhöfft, Friederich Otto: Carburetor Design - A Preliminary Study of the State of the Art. Rept. 11, 1916.
- Tice, Percival S.: Carbureting Conditions Characteristic of Aircraft Engines. Rept. 48, 1920.
- Tice, Percival S. and Dickinson, H. C.: Metering Characteristics of Carburetors. Rept. 49, 1920.
- Heller, Dr. A.: The 300 H.P. Benz Aircraft Engine. TN 34, Jan. 1921.
- Sparrow, Stanwood W.: "Airplane Crashes: Engine Troubles." A Possible Explanation. TN 55, March 1921.
- Kook, E.: Simple Means for Saving Fuel on Traffic Flights. TM 26, June 1921.
- Kutzbach, K.: Results of Experimental Flights at High Altitudes with Daimler, Benz, and Maybach Engines to Determine Mixture Formation and Heat Utilization of Fuel. TN 125, Jan. 1923.
- Anon.: Graetzin Special Carburetor. TM 189, Feb. 1923.
- Poincare: Carburetion in Aviation Engines. TM 225, Aug. 1923.

- Mixture Controls Reciprocating Engines (Cont.)
- Matthews, Robertson and Gardiner, A. W.: The Time Lag and Interval of Discharge with a Spring Actuated Fuel Injection Pump. TN 159, Sept. 1923.
- Sparrow, Stanwood W.: The Arithmetic of Distribution in Multi-Cylinder Engines. TN 162, Oct. 1923.
- Wilson, E. E.: Aircraft Engine Design. TN 211, Jan. 1925.
- Matthews, Robertson: Discharge Characteristics of a High Speed Fuel Injection System. TN 213, Feb. 1925.
- Kuehn, R.: Atomization of Liquid Fuels. I - Relation Between Atomization and Combustion. Methods Employed for Determining the Size of Particles and Small Drops. Choice of Experimental Method. TM 329, Sept. 1925.
- Kuehn, R.: Atomization of Liquid Fuels.
 II Description of Apparatus; Fuels
 Tested; Atomization Experiments;
 Discharge Measurements; Atomization.
 TM 330, Sept. 1925.
- Kuehn, R.: Atomization of Liquid Fuels. III - Critical Discussion of Experimental Results. Mixing the Atomized Fuel with Air. TM 331, Sept. 1925.
- Sparrow, Stanwood W.: The Effect of Changes in Compression Ratio upon Engine Performance. Rept. 205, 1926.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part I A General Discussion of the Subject of Fuel Injection in Diesel Engines and Detailed Descriptions of Many Types of Injection Nozzles. TM 356, April 1926.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part II A Discussion of the Semi-Diesel Principle and Its Application to Various Types of Solid-Injection Engines. TM 357, April 1926.
- Sauter, J.: Determining Size of Drops in Fuel Mixture of Internal Combustion Engines. TM 390, Dec. 1926.
- Miller, Harold E. and Beardsley, Edward G.: Spray Penetration with a Simple Fuel Injection Nozzle. Rept. 222, 1927.
- Joachim, W. F. and Beardsley, Edward G.: The Effects of Fuel and Cylinder Gas Densities on the Characteristics of Fuel Sprays for Oil Engines. Rept. 281, 1927.

Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part I. Engines with External Atomization of the Fuel. Engines with Internal Atomization of the Fuel. Hot-Bulb Engines. Diesel Engines. TM 397, Feb. 1927.

347

- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part II. TM 403, March 1927.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part III. TM 410, May 1927.
- Hicks, Chester W. and Moore, Charles S.:
 The Determination of Several Spray
 Characteristics of a High-Speed Oil
 Engine Injection System with an Oscilloscope. TN 298, Sept. 1928.
- Joachim, William F.; Hicks, Chester W. and Foster, Hampton H.: The Design and Development of an Automatic Injection Valve with an Annular Orifice of Varying Area. Rept. 341, 1929.
- Gelalles, A. G.: Some Effects of Air and Fuel Oil Temperatures on Spray Penetration and Dispersion. TN 338, May 1930.
- Gelalles, A. G.: Effect of Orifice Length-Diameter Ratio on Spray Characteristics. TN 352, Oct. 1930.
- Rothrock, A. M.: Effect of High Air Velocities on the Distribution and Penetration of a Fuel Spray. TN 376, May 1931.
- Scheubel, F. N.: On Atomization in Carburetors. TM 644, Oct. 1931.
- Rothrock, A. M. and Waldron, C. D.: Some Characteristics of Fuel Sprays at Low-Injection Pressures. TN 399, Nov. 1931.
- Spanogle, J. A. and Whitney, E. G.: The Effectiveness of a Double-Stem Injection Valve in Controlling Combustion in a Compression-Ignition Engine. TN 402, Dec. 1931.
- Castleman, R. A., Jr.: The Mechanism of Atomization Accompanying Solid Injection. Rept. 440, 1932.
- Rothrock, A. M.: Preliminary Tests on the Vaporization of Fuel Sprays. TN 408, Feb. 1932.
- Rothrock, A. M. and Waldron, C. D.: Effect of Engine Operating Conditions on the Vaporization of Safety Fuels. TN 430, Aug. 1932.
- Rothrock, A. M. and Waldron, C. D.: Effects of Air-Fuel Ratio on Fuel Spray and Flame Formation in a Compression-Ignition Engine. Rept. 545, 1935.

- Mixture Controls Reciprocating Engines (Cont.)
- Rothrock, A. M. and Waldron, C. D.: Effect of Nozzle Design on Fuel Spray and Flame Formation in a High-Speed Compression-Ignition Engine. Rept. 561, 1936.
- Lubenetsky, W. S.: Details of the Construction and Production of Fuel Pumps and Fuel Nozzles for the Airplane Diesel Engine: TM 803, Sept. 1936.
- Rothrock, A. M. and Waldron, C. D.: Fuel Spray and Flame Formation in a Compression-Ignition Engine Employing Air Flow. Rept. 588, 1937.
- Vohrer, Eugen: The Way to Increased Airplane Engine Power. TM 894, May 1939.
- Bell, Arthur H.: Continuous Use of Internal Cooling to Suppress Knock in Aircraft Engine Cruising at High Power. ARR E4H15 (WR E-55), Aug. 1944.
- Galvin, Herman B. and Essex, Henry A.:
 Fluid De-Icing Tests on a ChandlerEvans 1900 CPB-3 Carburetor Mounted
 on a Pratt and Whitney R-1830-C4
 Intermediate Rear Engine Section.
 ARR E4J06 (WR E-12), Oct. 1944.
- Shames, Sidney J.: Air-Consumption Parameters for Automatic Mixture Control of Aircraft Engines. Rept. 804, 1945.
- Farmer, J. Elmo and Munger, Maurice:
 Fuel Consumption Corrected for Cooling Drag of an Air-Cooled Radial Aircraft Engine at Low Fuel-Air Ratios and with Variable Spark Advance.
 ARR E5B01b (WR E-100), Feb. 1945.
- Biermann, Arnold E.; Miller, George R. and Henneberry, Hugh M.: Economy of Internally Cooling Only the Overheated Cylinders of Aircraft Engines. MR E5G14 (WR E-202), July 1945.
- Biermann, Arnold E.; Henneberry, Hugh M. and Miller, George R.: Control of Cylinder Temperatures by Thermostatically Operated Internal-Coolant Valves. MR E5G16 (WR E-200), July 1945.
- Shames, Sidney J. and Howes, William:
 Determination of Air-Consumption
 Parameters for Two Radial Aircraft
 Engines. MR E5H21 (WR E-193), Aug.
 1945.
- Harris, Herbert B.; Duffy, Robert T. and Erwin, Robert D., Jr.: Effect of Maximum Cruise-Power Operation at Ultra-Lean Mixture and Increased Spark Advance on the Mechanical Condition of Cylinder Components. MR E5127a (WR E-268), Sept. 1945.

- Renner, Clark E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. V Effect of Injection of Water-Fuel Mixtures and Water-Ethanol-Fuel Mixtures on the Icing Characteristics. MR E5L28 (WR E-174), Dec. 1945.
- Desmon, Leland G. and Doyle, Ronald B.: Effect of Exhaust Pressure on the Performance of a 12-Cylinder Liquid-Cooled Engine. TN 1367, July 1947.
- Coles, Willard D.: Laboratory Investigation of Ice Formation and Elimination in the Induction System of a Large Twin-Engine Cargo Aircraft. TN 1427, Sept. 1947.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.
- Lord, Albert M.; Heinicke, Orville H. and Stricker, Edward G.: Effect of Exhaust Pressure on Knock-Limited Performance of an Air-Cooled Aircraft-Engine Cylinder. TN 1617, June 1948.
- Otto, Edward W.: Analysis of Altitude Compensation Systems for Aircraft Carburetors. TN 1874, May 1949.

FUEL SUPPLY SYSTEM (3.2.1.3)

- Lucke, Charles Edward, assisted by Willhöfft, Friederich Otto: Carburetor Design. A Preliminary Study of the State of the Art. Rept. 11, 1916.
- Tice, Percival S. and Dickinson, H. C.: Metering Characteristics of Carburetors. Rept. 49, 1920.
- Heller, Dr. A.: The 300 H.P. Benz Aircraft Engine. TN 34, Jan. 1921.
- Anon.: Flexible Petrol Pipe. TM 31, July 1921.
- Anon.: Competition for Safety Fuel Tanks. TM 39, Sept. 1921.
- Frey, Ernst: The Small Diesel Engine as an Automotive Engine. TM 43, Sept. 1921.
- A Petrol-Proof Flexible Tubing at Last. An Invention of the Greatest Importance to Aviation. Taken from "Flight," September 15, 1921. TM 48, Oct. 1921.
- Anon: Fakir Fuel Pump. TM 101, June 1922.
- Sparrow, Stanwood W.: The Use of Multiplied Pressures for Automatic Altitude Adjustments. TN 108, Aug. 1922.

- Fuel Supply System Reciprocating Engines (Cont.)
- Kutzbach, K.: Results of Experimental Flights at High Altitudes with Daimler, Benz, and Maybach Engines to Determine Mixture Formation and Heat Utilization of Fuel. TN 125, Jan. 1923.
- Ziembinske, S.: Possible Improvements in Gasoline Engines. TM 182, Jan. 1923.
- Matthews, Robertson and Gardiner, A. W.: The Time Lag and Interval of Discharge with a Spring Actuated Fuel Injection Pump. TN 159, Sept. 1923.
- Wilson, E. E.: Aircraft Engine Design. TN 211, Jan. 1925.
- Matthews, Robertson: Discharge Characteristics of a High Speed Fuel Injection System. TN 213, Feb. 1925.
- Praetorius, K. R. H.: The Problem of Fuel Measurement (the Schiske "Konsummeter"). TM 315, May 1925.
- Joachim, W. F.: An Investigation of the Characteristics of Steel Diaphragms for Automatic Fuel-Injection Valves. TN 234, April 1926.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part I - A General Discussion of the Subject of Fuel Injection in Diesel Engines and Detailed Descriptions of Many Types of Injection Nozzles. TM 356, April 1926.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part II - A Discussion of the Semi-Diesel Principle and Its Application to Various Types of Solid-Injection En-gines. TM 357, April 1926.
- Gardiner, Arthur W.: A Preliminary Study of Fuel Injection and Compression Ignition as Applied to an Aircraft Engine Cylinder. Rept. 243, 1927.
- Beardsley, Edward G.: The NACA Photographic Apparatus for Studying Fuel Sprays from Oil Engine Injection Valves and Test Results from Several Researches. Rept. 274, 1927.
- Joachim, William F. and Beardsley, Edward G.: The Effects of Fuel and Cylinder Gas Densities on the Characteristics of Fuel Sprays for Oil Engines. Rept. 281, 1927.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part I. Engines with External Atomization of the Fuel. Engines with Internal Atomization of the Fuel. Hot-Bulb Engines. Diesel Engines. TM 397, Feb. 1927.

- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part II. TM 403, March 1927.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part III. TM 410, May 1927.
- Gelalles, A. G. and Rothrock, A. M.: Experimental and Analytical Determination of the Motion of Hydraulically Operated Valve Stems in Oil Engine Injection Systems. Rept. 330, 1928.
- Bassu, Jatindra Nath: Contribution to the Design and Calculation of Fuel Cams and Fuel Valves for Diesel Engines. TM 477, Aug. 1928.
- Hicks, Chester W. and Moore, Charles S.: The Determination of Several Spray Characteristics of a High-Speed Oil Engine Injection System with an Oscilloscope. TN 298, Sept. 1928.
- Joachim, W. F. and Beardsley, E. G.: Factors in the Design of Centrifugal Type Injection Valves for Oil Engines. Rept. 268, 1929.
- Joachim, William F.; Hicks, Chester W. and Foster, Hampton H .: The Design and Development of an Automatic Injection Valve with an Annular Orifice of Varying Area. Rept. 341, 1929.
- Rothrock, A. M. and Beardsley, E. G .: Some Effects of Air Flow on the Penetration and Distribution of Oil Sprays. TN 329, Dec. 1929.
- Rothrock, A. M.: Pressure Fluctuations in a Common-Rail Fuel Injection System. Rept. 363, 1930.
- Rothrock, A. M.: Injection Lags in a Common-Rail Fuel Injection System. TN 332, Feb. 1930.
- Spanogle, J. A. and Foster, H. H.: Performance of a High-Speed Compression-Ignition Engine Using Multiple Orifice Fuel Injection Nozzles. TN 344, June 1930.
- Gelalles, A. G.: Effect of Orifice Length-Diameter Ratio on Spray Characteristics. TN 352, Oct. 1930.
- Rothrock, A. M. and Lee, D. W.: Some Characteristics of Fuel Sprays from Open Nozzles. TN 356, Nov. 1930.
- Gelalles, A. G.: Coefficients of Discharge of Fuel Injection Nozzles for Compression-Ignition Engines. Rept. 373, 1931.
- Rothrock, A. M.: Hydraulics of Fuel Injection Pumps for Compression-Ignition Engines. Rept. 396, 1931.

- Fuel Supply System Reciprocating Engines (Cont.)
- Schey, Oscar W. and Rollin, Vern G.: The Effect of Increased Carburetor Pressure on Engine Performance at Several Compression Ratios. Rept. 404, 1931.
- Léglise, Pierre: Clerget 100 hp Heavy-Oil Engine. TM 603, Jan. 1931.
- Spanogle, J. A. and Hemmeter, G. T.:
 Development of an Impinging-Jet FuelInjection Valve Nozzle. TN 372, April
 1931.
- Gerrish, Harold C. and Voss, Fred: Investigation of the Discharge Rate of a Fuel-Injection System. TN 373, April 1931.
- Spanogle, J. A. and Foster, H. H.: Basic Requirements of Fuel-Injection Nozzles for Quiescent Combustion Chambers. TN 382, June 1931.
- Rothrock, A. M. and Marsh, E. T.: The Effect of Injection-Valve Opening Pressure on Spray-Tip Penetration. TN 384, July 1931.
- Rothrock, A. M.: The NACA Apparatus for Studying the Formation and Combustion of Fuel Sprays and the Results from Preliminary Tests. TN 389, Sept. 1931.
- Rothrock, A. M. and Marsh, E. T.: Penetration and Duration of Fuel Sprays from a Pump Injection System. TN 395, Oct. 1931.
- Rothrock, A. M. and Waldron, C. D.: Some Characteristics of Fuel Sprays at Low-Injection Pressures. TN 399, Nov. 1931.
- Spanogle, J. A. and Whitney, E. G.: The Effectiveness of a Double-Stem Injection Valve in Controlling Combustion in a Compression-Ignition Engine. TN 402, Dec. 1931.
- Lee, Dana W.: The Effect of Nozzle Design and Operating Conditions on the Atomization and Distribution of Fuel Sprays. Rept. 425, 1932.
- Gelalles, A. G. and Marsh, E. T.: Rates of Fuel Discharge as Affected by the Design of Fuel-Injection Systems for Internal-Combustion Engines. Rept. 433, 1932.
- Lee, Dana W.: Experiments on the Distribution of Fuel in Fuel Sprays. Rept. 438, 1932.
- Rothrock, A. M. and Lee, Dana W.: Effect of the Reservoir Volume on the Discharge Pressures in the Injection System of the NACA Spray Photography Equipment. TN 407, Feb. 1932.

- Haenlein, A.: Disintegration of a Liquid Jet. TM 659, Feb. 1932.
- Lee, Dana W. and Spencer, Robert C.: Photomicrographic Studies of Fuel Sprays. Rept. 454, 1933.
- Rothrock, A. M. and Marsh, E. T.: Penetration and Duration of Fuel Sprays from a Pump Injection System. Rept. 455, 1933.
- Marsh, E. T. and Waldron, C. D.: Some Characteristics of Sprays Obtained from Pintle-Type Injection Nozzles. TN 465, July 1933.
- Rothrock, A. M. and Marsh, E. T.: Effect of Viscosity on Fuel Leakage Between Lapped Plungers and Sleeves and on the Discharge from a Pump-Injection System. Rept. 477, 1934.
- Lutz, O.: The Processes in Spring-Loaded Injection Valves of Solid Injection Oil Engines. TM 758, Nov. 1934.
- Lee, Dana W.: A Comparison of Fuel Sprays from Several Types of Injection Nozzles. Rept. 520, 1935.
- Rothrock, A. M. and Marsh, E. T.: Distribution and Regularity of Injection from a Multicylinder Fuel-Injection Pump. Rept. 533, 1935.
- Rothrock, A. M. and Waldron, C. D.: Effect of Nozzle Design on Fuel Spray and Flame Formation in a High-Speed Compression-Ignition Engine. Rept. 561, 1936.
- Lee, Dana W.: Measurements of Fuel Distribution Within Sprays for Fuel-Injection Engines. Rept. 565, 1936.
- Lubenetsky, W. S.: Details of the Construction and Production of Fuel Pumps and Fuel Nozzles for the Airplane Diesel Engine. TM 803, Sept. 1936.
- Selden, Robert F. and Spencer, Robert C.: Heat Transfer to Fuel Sprays Injected into Heated Gases. Rept. 580, 1937.
- Lee, Dana W. and Marsh, E. T.: Discharge Characteristics of a Double Injection-Valve Single-Pump Injection System. TN 600, May 1937.
- Marsh, Edred T.: Discharge Characteristics of a Simulated Unit Injection System. TN 676, Nov. 1938.
- Tozier, Robert E.: An Electrical-Type Indicating Fuel Flowmeter. ACR, Sept. 1939.
- Marsh, Edred T.: Requirements for Unit Fuel-Injection Systems. ACR (WR E-50), July 1940.

- Fuel Supply System Reciprocating Engines (Cont.)
- Sontag, Harcourt and Brombacher, W. G.:
 Aircraft Power-Plant Instruments.
 Rept. 466, 1941.
- Kinghorn, George F.: Effect of Inlet-Air Velocity Distribution on the Metering Pressure of an Injection-Type Aircraft Carburetor. ARR (WR L-768), May 1942.
- Kimball, Leo B.: Icing Tests of Aircraft-Engine Induction Systems. ARR (WR W-97), Jan. 1943.
- Rubert, K. F.; Corson, Blake W., Jr. and Nielsen, Jack: The Advantages of Uniform Fuel Distribution for Air-Cooled Engines from Considerations of Cooling Requirements and Fuel Economy. CB 3L07 (WR L-338), Dec. 1943.
- Galvin, Herman B. and Essex, Henry A.:
 Fluid De-Icing Tests on a ChandlerEvans 1900 CPB-3 Carburetor Mounted
 on a Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J06 (WR E-12), Oct. 1944.
- Galvin, Herman B. and Essex, Henry A.:
 A Laboratory Investigation of the Icing
 Characteristics of the Bendix-Stromberg Carburetor Model PD-12F5 with
 the Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J18 (WR E-18), Oct. 1944.
- Essex, Henry A. and Galvin, Herman B.:
 A Laboratory Investigation of Icing and
 Heated-Air De-Icing of a ChandlerEvans 1900 CPB-3 Carburetor Mounted
 on a Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J03 (WR E-15), Oct. 1944.
- Marble, Frank E.; Ritter, William K. and Miller, Mahlon A.: Effect of the NACA Injection Impeller on the Mixture Distribution of a Double-Row Radial Aircraft Engine. Rept. 821, 1945.
- Essex, Henry A.; Keith, Wayne C. and Mulholland, Donald E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. II Determination of Limiting-Icing Conditions. MR E5L18a (WR E-171), Dec. 1945.
- Lyons, Richard E. and Coles, Willard D.:
 Laboratory Investigation of Icing in the
 Carburetor and Supercharger Inlet
 Elbow of the Lockheed P-38J Airplane.
 III Heated Air as a Means of De-Icing
 the Carburetor and Inlet Elbow.

- Renner, Clark E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. V Effect of Injection of Water-Fuel Mixtures and Water-Ethanol Fuel Mixtures on the Icing Characteristics. MR E5L28 (WR E-174), Dec. 1945.
- Mulholland, Donald R. and Chapman, Gilbert E.: Laboratory Investigations of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. VI - Effect of Modifications to Fuel-Spray Nozzle on Icing Characteristics. MR E6A23 (WR E-175), Jan. 1946.
- Ritter, William K.; Johnsen, Irving A. and Lieblein, Seymour: Hydraulic Characteristics of the NACA Injection Impeller. MR E6C25 (WR E-278), May 1946.
- Chapman, Gilbert E.: A Preliminary Investigation of the Icing Characteristics of the Chandler-Evans 58 CPB-4 Carburetor. MR E6G11 (WR E-284), July 1946.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr.; Scadron, Marvin D. and Colnar, Anthony: The NACA Mixture Analyzer and Its Application to Mixture-Distribution Measurement in Flight. TN 1238, March 1947.
- Michel, Donald J.; Hickel, Robert O. and Voit, Charles H.: Performance of a Double-Row Radial Aircraft Engine with Three Methods of Safety-Fuel Injection. TN 1413, Aug. 1947.
- Coles, Willard D.: Laboratory Investigation of Ice Formation and Elimination in the Induction System of a Large Twin-Engine Cargo Aircraft. TN 1427, Sept. 1947.
- Eppes, James V. D.; Livengood, James C. and Taylor, C. Fayette: The Effect of Changing the Ratio of Exhaust-Valve Flow Capacity to Inlet-Valve Flow Capacity on Volumetric Efficiency and Output of a Single-Cylinder Engine. TN 1365, Oct. 1947.

IGNITION SYSTEMS (3.2.1.4)

- Silsbee, F. B.; Loeb, L. B. and Fonseca, E. L.: Heat Energy of Various Ignition Sparks. Rept. 56, 1919.
- Silsbee, F. B.; Loeb, L. B.; Sawyer, L. G. and Fonseca, E. L.: Spark Plug Defects and Tests. Rept. 51, 1920.
- Silsbee, F. B.: Causes of Cracking of Ignition Cable. TN 32, Feb. 1921.

- Ignition Systems Reciprocating Engines (Cont.)
- Biermann, Arnold E.: Effect of Spark-Timing Regularity on the Knock Limitations of Engine Performance. TN 651, May 1938.
- Swett, Clyde C., Jr. and Rodgers, Franklin A.: The Effect of High-Resistance Ignition Cable on the Erosion of Spark-Plub Electrodes. MR E5I21 (WR E-267), Sept. 1945.
- Swett, Clyde C., Jr. and Dietrich, Joseph R.: Rubber Conductors for Aircraft Ignition Cables. ACR E5G27 (WR E-96), Nov. 1945.
- Eppes, James V. D.; Livengood, James C. and Taylor, C. Fayette: The Effect of Changing the Ratio of Exhaust-Valve Flow Capacity to Inlet-Valve Flow Capacity on Volumetric Efficiency and Output of a Single-Cylinder Engine. TN 1365, Oct. 1947.

GAS TURBINE ENGINES

(3.2.2)

- Wilcox, E. C.: Tests of an Adjustable-Area Exhaust Nozzle for Jet-Propulsion Engines. MR E5H16 (WR E-265), Aug. 1945.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part I Standardization of the Computations Relating to the Control of Gas-Turbine Power Plants for Aircraft by the Employment of the Laws of Similarity. TM 1142, April 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. II - Principles of Control Common to Jet, Turbine-Propeller Jet, and Ducted-Fan Jet Power Plants. TM 1143, April 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. III - Control of Jet Engines. TM 1166, May 1947.
- Kühl, H.: Preliminary Reports on the Fundamentals of the Control of Turbine-Propeller Jet Power Plants. TM 1172, July 1947.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.
- Kohl, Robert C.; Herzig, Howard Z. and Whitney, Warren J.: Effects of Partial Admission on Performance of a Gas Turbine. TN 1807, Feb. 1949.

- Boksenbom, Aaron S. and Hood, Richard: General Algebraic Method Applied to Control Analysis of Complex Engine Types. TN 1908, July 1949.
- LaVerne, Melvin E. and Boksenbom, Aaron S.: Methods for Determining Frequency Response of Engines and Control Systems from Transient Data. TN 1935, Aug. 1949.

METERING AND CONTROL PARAMETERS (3.2.2.1)

- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part III - Control of Jet Engines. TM 1166, May 1947.
- Kühl, H.: Preliminary Report on the Fundamentals of the Control of Turbine-Propeller Jet Power Plants. TM 1172, July 1947.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.
- Matz, Norman and Cesaro, Richard S.:
 Pressure-Sensitive System for GasTemperature Control. RM E8C04,
 June 1948.
- Heidmann, Marcus F. and Novik, David: Control Considerations for Optimum-Power Proportionment in Turbine-Propeller Engines. TN 1762, Dec. 1948.

FUEL SUPPLY SYSTEMS (3.2.2.2)

- Gerrish, Harold C.; Meem, J. Lawrence, Jr.; Scadron, Marvin D. and Colnar, Anthony: The NACA Mixture Analyzer and Its Application to Mixture-Distribution Measurement in Flight. TN 1238, March 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. II - Principles of Control Common to Jet, Turbine-Propeller Jet, and Ducted-Fan Jet Power Plants. TM 1143, April 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part III - Control of Jet Engines. TM 1166, May 1947.
- Dittrich, Ralph T.: Effects of Fuel-Nozzle Carbon Deposition on Combustion Efficiency of Single Tubular-Type, Reverse-Flow, Combustor at Simulated Altitude Conditions. TN 1618, June 1948.

RAM JET AND PULSE JET ENGINES

(3.2.3)

- Meier, Adolf: Recording Rapidly Changing Cylinder-Wall Temperatures. TM 1013, May 1942.
- Valerino, Michael F.; Essig, Robert H. and Hughes. Richard F.: The Effect of Increase in Combustion-Air Inlet Temperature from 80° to 130° F on the Sea-Level Performance of the Ford MX-544 Intermittent Jet Engine. Bur. Aero. MR E6G01 (WR E-283), July 1946.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.

METERING AND CONTROL PARAMETERS (3.2.3.1)

Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.

ROCKETS

(3.2.4)

Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.

> METERING AND CONTROL PARAMETERS - ROCKETS (3.2.4.1)

Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.

FUEL SUPPLY SYSTEMS (3.2.4.2)

- Sanger, Eugen: Recent Results in Rocket Flight Technique. TM 1012, April 1942.
- Busemann, Adolph: Rockets Using Liquid Oxygen. TM 1144, April 1947.
- Zborowski, Helmut: Rocket Power Plants Based on Nitric Acid and Their Specific Propulsive Weights. TM 1145, May 1947.
- Walter, Hellmuth: Report on Rocket Power Plants Based on T-Substance. TM 1170, July 1947.

Auxiliary Booster Systems

(3.3)

Turner, L. Richard: Consideration of Auxiliary Jet Propulsion for Assisting Take-Off. ACR (WR E-49), May 1940.

RECIPROCATING ENGINES

(3.3.1)

- Prayer, Georg: Increasing the Power of Internal Combustion Engines. TM 321, July 1925.
- Kurtz, Oskar: Research and Design Problems Introduced by Increased Power Output. TM 840, Oct. 1937.
- Campbell, Paul J.: Tests of Exhaust Propulsion Nozzles. ARR 3E21 (WR W-43), May 1943.
- Engelman, Helmuth W. and White, H. Jack:
 Use of Water Injection to Decrease
 Gasoline Consumption in an Aircraft
 Engine Cruising at High Power. RB
 E4H12 (WR E-21), Aug. 1944.
- Harries, Myron L.; Nelson, R. Lee and Berguson, Howard E.: Effect of Water Injection on the Knock-Limited Performance of an Allison V-1710-99 Engine. MR (WR E-244), Sept. 1944.
- Desmon, Leland G. and Doyle, Ronald B.: Calculated Performance of 12-Cylinder Liquid-Cooled Engine with Exhaust-Gas Turbine Geared to Crankshaft. TN 1602, June 1948.
- Desmon, Leland G. and Sams, Eldon W.:
 Performance of Exhaust-Gas Blowdown
 Turbine and Various Engine Systems
 Using a 12-Cylinder Liquid-Cooled
 Engine. TN 1735, Nov. 1948.

GAS TURBINES

(3.3.2)

- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Wilcox, E. C.: Tests of an Adjustable-Area Exhaust Nozzles for Jet-Propulsion Engines. MR E5H16 (WR E-265), Aug. 1945.

LIQUID INJECTION (3.3.2.1)

- Jones, William L. and Dowman, Harry W.:
 Investigation of Thrust Augmentation of
 a 1600-Pound Thrust Centrifugal-FlowType Turbojet Engine by Injection of
 Refrigerants at Compressor Inlets.
 RM E7G23, Aug. 1947.
- Bogart, Donald; Okrent, David and Turner, L. Richard: Thermodynamic Charts for the Computation of Fuel Quantity Required for Constant-Pressure Combustion with Diluents. TN 1655, July 1948.

AFTERBURNING (3.3.2.2)

- Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.
- Cleveland Laboratory Staff: Performance and Ranges of Application of Various Types of Aircraft-Propulsion System. TN 1349, Aug. 1947.

Fuels

(3.4)

- Neumann, Kurt: Experiments on Self-Ignition of Liquid Fuels. TM 391, Dec. 1926.
- Stevens, F. W.: The Gaseous Explosive Reaction - A Study of the Kinetics of Composite Fuels. Rept. 305, 1929.
- Pahl, H.: Effect of Oxygen on the Ignition of Liquid Fuels. TM 497, Jan. 1929.
- Duchêne, M. R.: Contribution to the Study of Normal Burning in Gaseous Carbureted Mixtures. Part I. TM 547, Jan. 1930.
- Duchêne, M. R.: Contribution to the Study of Normal Burning in Gaseous Carbureted Mixtures. Part II. TM 548, Jan. 1930.
- Rothrock, A. M.: The NACA Apparatus for Studying the Formation and Combustion of Fuel Sprays and the Results from Preliminary Tests. Rept. 429, 1932.
- Rothrock, A. M. and Cohn, Mildred: Some Factors Affecting Combustion in an Internal-Combustion Engine. Rept. 512, 1934.
- Lee, Dana W. and Krsek, Alois, Jr.: Investigation of Naphthalene as a Possible Aircraft Fuel. CMR (WR E-168), Aug. 1941.
- Tischler, A. O.; Slabey, V. A. and Olson, W. T.: Gasoline-Water Distribution Coefficients of Xylidines. MR (WR E-154), June 1943.
- Revilock, J. and Olson, W. T.: Water Tolerance of Aviation Gasoline Containing Xylidines. MR (WR E-155), July 1943.
- Olson, Walter T. and Meyrowitz, Emanuel: The Effect of Xylidines on the Stability of an Aircraft-Engine Lubricating Oil. MR (WR E-158), Aug. 1943.
- Olson, Walter T. and Spurr, Robert A.: The Effect of Xylidines on the Load-Carrying Capacity of an Aircraft-Engine Oil - II. (WR E-160), Sept. 1943.
- Rothrock, Addison M.: Use of Internal Coolant as a Means of Permitting Increase in Engine Take-Off Power. RB 4A25 (WR E-117), Jan. 1944.

- Olson, Walter T. and Tischler, Adelbert
 O.: Loss of Xylidines in Overwater
 Storage of Xylidine-Blended Fuel. MR
 (WR E-161), March 1944.
- Olson, Walter T. and Kelly, Richard L.:
 The Low Temperature Solubility of
 Aniline, and Toluidines, and Some of
 Their n-Alkyl Derivatives in Aviation
 Gasoline. MR (WR E-162), June 1944.
- Olson, Walter T.; Tischler, Adelbert O. and Goodman, Irving A.: Gasoline-Water Distribution Coefficients of 27 Aromatic Amines. MR (WR E-163), Aug. 1944.
- Barnett, Henry C. and Imming, Harry S.: The Effect of Engine Conditions on the Lead Susceptibility of Paraffinic Fuels. ARR E4J02 (WR E-226), Oct. 1944.
- Bellman, Donald R. and Evvard, John C.: Knock-Limited Performance of Several Internal Coolants. Rept. 812, 1945.
- Branstetter, J. Robert: Comparison of the Knock-Limited Performance of Triptane with 23 Other Purified Hydrocarbons. MR E5E15 (WR E-259), May 1945.
- Ebersole, Earl R. and Barnett, Henry C.: Smoking Characteristics of Various Fuels. I - Open-Cup Smoke Tests. MR E5F20 (WR E-190), June 1945.
- Goodman, Irving A. and Howard, J. Nelson: Suitability of 18 Aromatic Amines for Overwater Storage When Blended with Aviation Gasoline. MR E5F20a (WR E-166), June 1945.
- Jessup, R. S. and Cragoe, C. S.: Net Heat of Combustion of AN-F-28 Aviation Gasolines. TN 996, June 1945.
- Ebersole, Earl R.: Smoking Characteristics of Various Fuels. II Laboratory-Burner Smoke Tests. MR E5I12 (WR E-190), Sept. 1945.
- Robinson, J. V. and Woods, W. W.: A General Method of Selecting Foam Inhibitors. TN 1025, May 1946.
- Ross, Sydney: Foaming Volume and Foam Stability. TN 1153, Feb. 1947.

Reynolds, Thaine W. and Ebersole, Earl R.: Effect of Hydrocarbon Type and Chain Length on Uniform Flame Movement in Quiescent Fuel-Air Mixtures. TN 1609, June 1948.

PREPARATION

(3.4.1)

- Paris, Auguste Jean, Jr. and Paris, W. Francklyn: A New Process for the Production of Aircraft-Engine Fuels. Rept. 42, 1919.
- Dunstan, A. E. and Thole, F. B.: Aviation Spirit - Past, Present, and Future. TM 229, Sept. 1923.
- Drake, N. L.: The Preparation of 2,2,4,4-Tetramethylpentane. RB (WR W-77), May 1942.
- Karabinos, Joseph V. and Lamberti, Joseph M.: The Synthesis and Purification of Aromatic Hydrocarbons. I - Butylbenzene. TN 1019, Jan. 1946.
- Ebersole, Earl R.: The Synthesis and Purification of Aromatic Hydrocarbons. II 1,2,4-Trimethylbenzene. TN 1020, Jan. 1946.
- Slabey, Vernon A.: The Synthesis of Methylenecyclobutane, Spiropentane, and 2-Methyl-1-butene from Pentaerythrityl Tetrabromide. TN 1023, Feb. 1946.
- Buess, C. M.; Karabinos, J. V.; Kunz, P. V. and Gibbons, L. C.: The Synthesis and Purification of Aromatic Hydrocarbons. III Isobutylbenzene, sec-Butylbenzene and tert-Butylbenzene. TN 1021, June 1946.
- Lamberti, J. M.; Reynolds, T. W. and Chanan, H. H.: The Synthesis and Purification of Aromatic Hydrocarbons. IV - 1,2,3-Trimethylbenzene. TN 1163, Nov. 1946.
- Ebersole, Earl R.: The Synthesis and Purification of Aromatic Hydrocarbons. V 1-Ethyl-3-methylbenzene. TN 1164, Nov. 1946.
- Howard, Frank L.; Mears, Thomas W.; Fookson, A.; Pomerantz, Philip and Brooks, Donald B.: The Preparation and Physical Properties of Several Aliphatic Hydrocarbons and Intermediates. TN 1247, May 1947.

PHYSICAL PROPERTIES

(3.4.2)

- Heinlein, Fritz: Experimental Investigation of Physical Properties of Medium and Heavy Oils, Their Vaporization and Use in Explosion Engines. Part I. TM 362, May 1926.
- Heinlein, Fritz: Experimental Investigation of the Physical Properties of Medium and Heavy Oils, Their Vaporization and Use in Explosion Engines. Part II. TM 363, May 1926.
- Heinlein, Fritz: Experimental Investigation of the Physical Properties of Medium and Heavy Oils, Their Vaporization and Use in Explosion Engines. Part III. TM 384, Oct. 1926.
- Heinlein, Fritz: Experimental Investigation of the Physical Properties of Medium and Heavy Oils, Their Vaporization and Use in Explosion Engines. Part IV. TM 392, Dec. 1926.
- Anon.: Use of Ferrier Safety Fuel with Zenith Carburetors. MP 21, May 1928.
- Widmaier, O.: The Lead Susceptibility of Fuels and Its Dependence on the Chemical Composition. TM 940, April 1940.
- Drake, N. L.: The Preparation of 2,2,4,4-Tetramethylpentane. RB (WR W-77), May 1942.
- Olson, W. T.: The Low-Temperature Solubility of Technical Xylidines in Aviation Gasoline. RMR (WR E-153), June 1943.
- Tischler, A. O.; Slabey, V. A. and Olson, W. T.: Gasoline-Water Distribution Coefficients of Xylidines. MR (WR E-154), June 1943.
- Revilock, J. and Olson, W. T.: Water Tolerance of Aviation Gasoline Containing Xylidines. MR (WR E-155), July 1943.
- Olson, Walter T. and Tischler, Adelbert O.: Loss of Xylidines in Overwater Storage of Xylidine Blended Fuel. MR (WR E-161), March 1944.
- Olson, Walter T. and Kelly, Richard L.: The Low Temperature Solubility of Aniline, and Toluidines, and Some of Their n-Alkyl Derivatives in Aviation Gasoline. MR (WR E-162), June 1944.
- Barnett, Henry C.; Meyer, Carl L. and Jones, Anthony W.: Engine and Inspection Tests of Methyl tert-Butyl Ether as a Component of Aviation Fuel. ACR E4H03 (WR E-214), Aug. 1944.

- Physical Properties (Cont.)
- Olson, Walter T.; Tischler, Adelbert O. and Goodman, Irving A.: Gasoline-Water Distribution Coefficients of 27 Aromatic Amines. MR (WR E-163), Aug. 1944.
- White, H. Jack and Engelman, Helmuth W.: Effect of Fuel Volatility on Performance of a Wright R-2600-8 Engine as Influenced by Mixture Distribution. ARR E4105 (WR E-87), Sept. 1944.
- Meyer, Carl L. and Branstetter, Robert J.: The Knock-Limited Performance of Fuel Blends Containing Aromatics. Part I - Toluene, Ethylbenzene, and p-Xylene. ARR E4J05, Oct. 1944.
- Kelly, Richard L.: The Low-Temperature Solubility of 24 Aromatic Amines in Aviation Gasoline. MR E4K17 (WR E-164), Nov. 1944.
- Imming, Harry S.; Barnett, Henry C. and Genco, Russell S.: F-3 and F-4 Engine Tests of Triptane and Other High-Antiknock Components of Aviation Gasoline. Part II. MR E4K27 (WR E-246), Nov. 1944.
- Stone, Charles S.; Baker, Sol and Englert, Gerald W.: Analysis and Correlation of Data Obtained by Six Laboratories on Fuel-Vapor Loss from Fuel Tanks During Simulated Flight. MR E4L19 (WR E-185), Dec. 1944.
- Stone, Charles S.; Baker, Sol and Black, Dugald O.: Flight Variables Affecting Fuel-Vapor Loss from a Fuel Tank. MR E4L28 (WR E-186), Dec. 1944.
- Cleaves, Alden P.: Ultraviolet Spectrochemical Analysis for Aromatics in Aircraft Fuels. ARR E5B14 (WR E-115), March 1945.
- Meyer, Carl L. and Branstetter, Robert J.:
 The Knock-Limited Performance of
 Fuel Blends Containing Aromatics.
 Part III 1,3,5-Trimethylbenzene,
 tert-Butylbenzene and 1,2,4-Trimethylbenzene. ARR E5D16, April 1945.
- Meyer, Carl L. and Branstetter, Robert J.:
 The Knock-Limited Performance of
 Fuel Blends Containing Aromatics.
 Part IV Data for m-Diethylbenzene,
 1-Ethyl-4-Methylbenzene and sec-Butylbenzene Together with a Summarization of Data for 12 Aromatic Hydrocarbons. ARR E5D16a, April 1945.
- Stone, Charles S. and Kramer, Walter E.:
 Fuel-Vaporization Loss as Determined
 by the Change in the Specific Gravity
 of the Fuel in an Aircraft Fuel Tank.
 RB E5E19 (WR E-113), May 1945.

- Jessup, R. S. and Cragoe, C. S.: Net Heat of Combustion of AN-F-28 Aviation Gasolines. TN 996, June 1945.
- Cleaves, Alden P. and Sherrick, Mildred E.: Infrared-Spectrophotometric Analysis of Binary and Ternary Mixtures of Liquid Hydrocarbons. ARR E5F27 (WR E-89), June 1945.
- Goodman, Irving A. and Howard, J. Nelson: Suitability of 18 Aromatic Amines for Overwater Storage When Blended with Aviation Gasoline. MR E5F20a (WR E-166), June 1945.
- Stone, Charles S. and Kramer, Walter E.:
 Reduction of Fuel-Vapor Loss by Omitting Some of the Fuel Constituents
 Normally Lost During Flight. MR
 E5H27 (WR E-185), Aug. 1945.
- Kelly, Richard L.: The Low-Temperature Solubility of 42 Aromatic Amines in Aviation Gasoline. MR E5K09 (WR E-167), Nov. 1945.
- Tischler, Adelbert O.: Quantitative Analysis for Aromatic Amines in Aviation Fuels by Ultraviolet Spectrophotometry. ARR E5H27 (WR E-69), Nov. 1945.
- Tischler, Adelbert O. and Howard, J.
 Nelson: Ultraviolet Absorption Spectra
 of Aromatic Amines in Isooctane and
 in Water. ARR E5H27a (WR E-68),
 Nov. 1945.
- Hipsher, Harold F.: A Method for the Determination of Aromatics in Hydrocarbon Mixtures. RB E5K06 (WR E-111), Dec. 1945.
- Karabinos, Joseph V. and Lamberti, Joseph M.: The Synthesis and Purification of Aromatic Hydrocarbons. I - Butylbenzene. TN 1019, Jan. 1946.
- Ebersole, Earl R.: The Synthesis and Purification of Aromatic Hydrocarbons.
 II 1,2,4-Trimethylbenzene. TN 1020,
 Jan. 1946.
- Slabey, Vernon A.: The Synthesis of Methylenecyclobutane, Spiropentane, and 2-Methyl-1-Butene from Pentaerythrityl Tetrabromide. TN 1023, Feb. 1946.
- Meyer, Carl L. and Branstetter, Robert J.:
 The Knock-Limited Performance of
 Fuel Blends Containing Aromatics.
 V n-Propylbenzene, n-Butylbenzene,
 Isobutylbenzene m-Xylene, and 1-Isopropyl-4-Methylbenzene. ARR E6C05,
 March 1946.

Physical Properties (Cont.)

- Barnett, Henry C. and Marsh, Edred T.: Effects of Fuel-Vapor Loss on Knock-Limited Performance and Inspection Properties of Aviation Fuels. RB E6C01 (WR E-221), March 1946.
- Gilbert, Mitchell; Howard, John N. and Hicks, Bruce L.: An Analysis of the Factors Affecting the State of Fuel and Air Mixtures. TN 1078, May 1946.
- Buess, C. M.; Karabinos, J. V.; Kunz, P. V. and Gibbons, L. C.: The Synthesis and Purification of Aromatic Hydrocarbons. III Isobutylbenzene, sec-Butylbenzene, and tert-Butylbenzene. TN 1021, June 1946.
- Cleaves, Alden P. and Sherrick, Mildred E.: The Infrared Spectra of Spiropentane Methylenecyclobutane and 2-Methyl-1-Butene. TN 1160, Oct. 1946.
- Lamberti, J. M.; Reynolds, T. W. and Chanan, H. H.: The Synthesis and Purification of Aromatic Hydrocarbons. IV - 1,2,3-Trimethylbenzene. TN 1163, Nov. 1946.
- Ebersole, Earl R.: The Synthesis and Purification of Aromatic Hydrocarbons. V 1-Ethyl-3-Methylbenzene. TN 1164, Nov. 1946.
- Cleaves, Alden P. and Carver, Mildred S.: A Spectrophotometric Method for Identification and Estimation of Alkylnaphthalenic-Type Hydrocarbons in Kerosene. TN 1243, April 1947.
- Howard, Frank L.; Mears, Thomas W.; Fookson, A.; Pomerantz, Philip and Brooks, Donald B.: The Preparation and Physical Properties of Several Aliphatic Hydrocarbons and Intermediates. TN 1247, May 1947.
- Michel, Donald J.; Hickel, Robert O. and Voit, Charles H.: Performance of a Double-Row Radial Aircraft Engine with Three Methods of Safety-Fuel Injection. TN 1413, Aug. 1947.
- Busch, Arthur M.; Cleaves, Alden P. and Hibbard, Robert R.: A Method for Determination of Aromatics in 150° to 300° C Fractions of Crude Petroleum by Measurement of Aniline-Point Rise. TN 1641, June 1948.
- Cleaves, Alden P.; Carver, Mildred S. and Hibbard, Robert R.: Quantitative Analysis of Ternary Mixtures of Naphthalene, 1-Methylnaphthalene, and 2-Methylnaphthalene. TN 1608, June 1948.

RELATION TO ENGINE PERFORMANCE

(3.4.3)

- Meyer, P.: Is There Any Available Source of Heat Energy Lighter than Gasoline? TN 136, April 1923.
- Kuehn, R.: Atomization of Liquid Fuels I Relation Between Atomization and Combustion. Methods Employed for Determining the Size of Particles and Small Drops. Choice of Experimental Method. TM 329, Sept. 1925.
- Kuehn, R.: Atomization of Liquid Fuels II Description of Apparatus Fuels Tested Atomization Experiments Discharge Measurements Atomization. TM 330, Sept. 1925.
- Kuehn, R.: Atomization of Liquid Fuels -III - Critical Discussion of Experimental Results. Mixing the Atomized Fuel with Air. TM 331, Sept. 1925.
- Ware, Marsden: Description of the NACA Universal Test Engine and Some Test Results. Rept. 250, 1926.
- Richter, Ludwig: On the Knocking of Gasoline Engines. TM 371, July 1926.
- Schey, Oscar W. and Young, Alfred W.:
 Performance of a Fuel-Injection SparkIgnition Engine Using a Hydrogenated
 Safety Fuel. Rept. 471, 1933.
- Schey, Oscar W. and Young, Alfred W.: Engine Performance with a Hydrogenated Safety Fuel. TN 466, July 1933.
- Michailova, M. N. and Neumann, M. B.: The Cetene Scale and the Induction Period Preceding the Spontaneous Ignition of Diesel Fuels in Bombs. TM 813, Dec. 1936.
- Kurtz, Oskar: Research and Design Problems Introduced by Increased Power Output. TM 840, Oct. 1937.
- Rothrock, A. M. and Biermann, Arnold E.: The Knocking Characteristics of Fuels in Relation to Maximum Permissible Performance of Aircraft Engines. Rept. 655, 1939.
- Weinhart, H.: Knocking in the Otto-Cycle Engine. TM 911, Sept. 1939.
- Seeber, F.: Modern Methods of Fuel Testing. TM 924, Dec. 1939.
- Taylor, E. S.; Leary, W. A. and Diver, J. R.: Effect of Fuel-Air Ratio, Inlet Temperature, and Exhaust Pressure on Detonation. Rept. 699, 1940.

- Relation to Engine Performance (Cont.)
- Sokolik, A. and Voinov, A.: Knocking in An Internal-Combustion Engine. TM 928, Jan. 1940.
- Sanders, Newell D. and Barnett, Henry C.: Effect of Varying Percentages of Exhaust Gas on Engine Performance. RB 3D27 (WR E-120), April 1943.
- Evvard, John C.; Imming, Harry S. and Genco, Russel S.: The Knock-Limited Blending Characteristics of Blends of Triptane and 28-R Aviation Gasoline. MR (WR E-242), April 1944.
- Barnett, Henry C. and Slough, James W., Jr.: Supercharged-Engine Knock Tests of Methyl tert-Butyl Ether. ACR E4H10 (WR E-215), Aug. 1944.
- Cook, Harvey A.; Vandeman, Jack E. and Brown, Kenneth D.: Effect of Several Methods of Increasing Knock-Limited Power on Cylinder Temperatures. ARR E4I15 (WR E-36), Sept. 1944.
- Blackman, Calvin C.; White, H. Jack and Pragliola, Philip C.: Flight and Test-Stand Investigation of High-Performance Fuels in Pratt and Whitney R-1830-90C Engines. I Determination of the Cooling Characteristics of the Flight Engine. MR E4L20 (WR E-247), Dec. 1944.
- Farmer, J. Elmo and Munger, Maurice: Fuel Consumption Corrected for Cooling Drag of an Air-Cooled Radial Air-craft Engine at Low Fuel-Air Ratios and with Variable Spark Advance. ARR E5B01b (WR E-100), Feb. 1945.
- White, H. Jack; Blackman, Calvin C. and Dandois, Marcel: Flight and Test-Stand Investigation of High-Performance Fuels in Pratt and Whitney R-1830-90C Engines. III Comparison of Cooling Characteristics of Flight and Test-Stand Engines. MR E5B23 (WR E-253), Feb. 1945.
- Cook, Harvey A.; Richard, Paul H. and Brown, Kenneth D.: The Effect of Valve Clearance on Knock-Limited Performance and Engine Cooling. MR E5D18 (WR E-189), April 1945.
- Mulcahy, B. A. and Zipkin, M. A.: The Effects of an Increase in the Concentration of Ethylene Dibromide in a Leaded Fuer on Lead Deposition, Corrosion of Exhaust Valves, and Knock-Limited Power. ARR E5E04a (WR E-43), June 1945.

- Werner, Milton; Blackman, Calvin C. and White, H. Jack: Flight and Test-Stand Investigation of High-Performance Fuels in Pratt and Whitney R-1830-94 Engines. I Determination of the Cooling Characteristics of the Flight Engine. MR E5G09 (WR E-261), July 1945.
- White, H. Jack; Pragliola, Philip C. and Blackman, Calvin C.: Flight and Test-Stand Investigation of High-Performance Fuels in Pratt and Whitney R-1830-94 Engines. II - Flight Knock Data and Comparison of Fuel Knock Limits with Engine Cooling Limits in Flight. MR E5H04 (WR E-262), Aug. 1945.
- Blackman, Calvin C. and White, H. Jack:
 Flight and Test-Stand Investigation of
 High-Performance Fuels in Pratt and
 Whitney R-1830-94 Engines. III Knock-Limited Performance of 33-R
 as Compared with a Triptane Blend and
 28-R in Flight. MR E5H08 (WR
 E-263), Aug. 1945.
- Brown, Kenneth D.; Richard, Paul H. and Wilson, Robert W.: Correlation of the Characteristics of Single-Cylinder and Flight Engines in Tests of High-Performance Fuels in a Pratt and Whitney R-1830-94 Engine. II Knock-Limited Charge-Air Flow and Cylinder Temperatures. MR E5J12 (WR E-272), Oct. 1945.
- Evvard, John C.: A Relation Between Knock-Limited or Preignition-Limited Air-Fuel Ratio at Lean Mixtures and Fuel-Air Ratio at Rich Mixtures. CB E5J11 (WR E-208), Nov. 1945.
- Moeckel, W. E. and Evvard, J. C.: Determination of Gas Temperatures from the Frequency of Knock-Induced Gas Vibrations in An Internal-Combustion Engine. ARR E6A07 (WR E-132), Jan. 1946.
- Barnett, Henry C. and Marsh, Edred T.:
 Effects of Fuel-Vapor Loss on KnockLimited Performance and Inspection
 Properties of Aviation Fuels. RB
 E6C01 (WR E-221), March 1946.
- Leary, W. A.; Taylor, E. S.; Taylor, C. F. and Jovellanos, J. U.: A Rapid Compression Machine Suitable for Studying Short Ignition Delays. TN 1332, Feb. 1948.
- Cleaves, Alden P.; Carver, Mildred S. and Hibbard, Robert R.: Quantitative Analysis of Ternary Mixtures of Naphthalene, 1-Methylnaphthalene, and 2-Methylnaphthalene. TN 1608, June 1948.

Relation to Engine Performance (Cont.)

RECIPROCATING ENGINES (3.4.3.1)

- Sparrow, Stanwood W.: The Background of Detonation. TN 93, April 1922.
- Riedler, A.: Disturbing Effect of Free Hydrogen on Fuel Combustion in Internal Combustion Engines. TN 133, March 1923.
- Anon.: Engines and Fuels. TM 224, Aug. 1923.
- Sparrow, Stanwood W.: Fuels for High-Compression Engines. Rept. 232, 1925.
- Wilson, E. E.: Aircraft Engine Design. TN 211, Jan. 1925.
- Sauter, J.: Determining Size of Drops in Fuel Mixture of Internal Combustion Engines. TM 390, Dec. 1926.
- Sauter, J.: Determining the Efficiency of Atomization by Its Fineness and Uniformity. TM 396, Jan. 1927.
- Joachim, Wm. F. and Rothrock, A. M.: Fuel Vapor Pressures and the Relation of Vapor Pressure to the Preparation of Fuel for Combustion in Fuel Injection Engines. Rept. 321, 1929.
- Rothrock, A. M. and Biermann, Arnold E.: The Knocking Characteristics of Fuels in Relation to Maximum Permissible Performance of Aircraft Engines. Rept. 655, 1939.
- Rubert, K. F.; Corson, Blake W., Jr. and Nielsen, Jack: The Advantages of Uniform Fuel Distribution for Air-Cooled Engines from Considerations of Cooling Requirements and Fuel Economy. CB 3L07 (WR L-338), Dec. 1943.
- Renner, Clark E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. V Effect of Injection of Water-Fuel Mixtures and Water-Ethanol -- Fuel Mixtures on the Icing Characteristics. MR E5L28 (WR E-174), Dec. 1945.
- Leary, W. A.; Taylor, E. S.; Taylor, C. F. and Jovellanos, J. U.: The Effect of Fuel Composition, Compression Pressure, and Fuel-Air Ratio on the Compression-Ignition Characteristics of Several Fuels. TN 1470, March 1948.

Spark-Ignition (3.4.3.1.1)

Dickinson, H. C.; James, W. S.; Roberts, E. W.; Gage, V. R. and Harper, D. R., 3d.: Power Characteristics of Fuels for Aircraft Engines. Rept. 47, 1920.

- Gage, V. R.; Sparrow, S. W. and Harper,
 D. R., 3d.: Comparison of Alcogas
 Aviation Fuel with Export Aviation
 Gasoline. Rept. 89, 1920.
- Dickinson, H. C.; Gage, V. R. and Sparrow, S. W.: Comparison of Hecter Fuel with Export Aviation Gasoline. Rept. 90, 1920.
- Kutzbach, (edited by W. S. James): The Problem of Fuel for Aviation Engines. TN 62, July 1921.
- Dunstan, A. E. and Thole, F. B.: Aviation Spirit - Past, Present and Future. TM 229, Sept. 1923.
- Gallo, Gino: The Problem of Liquid Fuels (For Aircraft Engines). TM 270, July 1924.
- Ware, Marsden: Description of the NACA Universal Test Engine and Some Test Results. Rept. 250, 1926.
- Sauter, J.: Determining the Efficiency of Atomization by Its Fineness and Uniformity. TM 396, Jan. 1927.
- Dumanois, P.: Aviation Fuels (with Especial Reference to "White Spirit"). TM 451, Feb. 1928.
- Anon.: Use of Ferrier Safety Fuel with Zenith Carburetors. MP 21, May 1928.
- Grebel, A.: "Safety" Fuels for Aircraft Engines. TM 494, Jan. 1929.
- Rothrock, A. M. and Spencer, R. C.: A Preliminary Study of Flame Propagation in a Spark-Ignition Engine. TN 603, June 1937.
- Peletier, L. A.: Effect of Air-Fuel Ratio on Detonation in Gasoline Engines. TM 853, March 1938.
- Rothrock, A. M. and Biermann, Arnold E.: Engine Performance and Knock Rating of Fuels for High-Output Aircraft Engines. TN 647, April 1938.
- Rothrock, A. M. and Biermann, Arnold E.: The Knocking Characteristics of Fuels in Relation to Maximum Permissible Performance of Aircraft Engines. Rept. 655, 1939.
- Weinhart, H.: Knocking in the Otto-Cycle Engine. TM 911, Sept. 1939.
- Peschard, Marcel: Activation of Hydrocarbons and the Octane Number. TM 916, Oct. 1939.
- Sokolik, A. and Voinov, A.: Knocking in an Internal-Combustion Engine. TM 928, Jan. 1940.

- Spark-Ignition Relation to Engine Performance (Cont.)
- Seeber, Fritz: Testing of High-Octane Fuels in the Single-Cylinder Airplane Engine. TM 931, Feb. 1940.
- Schütz, R.: Measurement of Knock Characteristics in Spark-Ignition Engines. TM 936, March 1940.
- Widmaier, O.: The Lead Susceptibility of Fuels and Its Dependence on the Chemical Composition. TM 940, April 1940.
- Lee, Dana W.: The Effects of Engine Speed and Mixture Temperature on the Knocking Characteristics of Several Fuels. TN 767, July 1940.
- Rothrock, A. M. and Biermann, Arnold E.: Correlation of Knocking Characteristics of Fuels in an Engine Having a Hemispherical Combustion Chamber. TN 768, July 1940.
- Spencer, R. C.: Preignition Characteristics of Several Fuels Under Simulated Engine Conditions. Rept. 710, 1941.
- Lee, Dana W. and Krsek, Alois, Jr.: Investigation of Naphthalene as a Possible Aircraft Fuel. MR (WR E-168), Aug. 1941.
- Rothrock, Addison M.; Biermann, Arnold E. and Corrington, Lester C.: Maximum Permissible Engine Performance of Eight Representative Fuels of 100-Octane Number. ARR (WR E-84), Jan. 1942.
- Biermann, Arnold E.; Corrington, Lester C. and Harries, Myron L.: Effect of Additions of Aromatics on the Knocking Characteristics of Several 100-Octane Fuels at Two Engine Speeds. ARR (WR E-53), May 1942.
- Krsek, Alois, Jr. and Jones, Anthony W.: Effect of an Aromatic Mixture Added to Two 100-Octane Fuels on Engine Temperatures and Fuel Consumption. ARR (WR E-119), June 1942.
- Gilbert, Mitchell: Effect of Aromatics and Spark Advance on Thermal Efficiency, ARR (WR E-99), Sept. 1942.
- Sanders, Newell D.: A Method of Estimating the Knock Rating of Hydrocarbon Fuel Blends. Rept. 760, 1943.
- Leary, W. A. and Taylor, E. S.: The Significance of the Time Concept in Engine Detonation. ARR (WR W-32), Jan. 1943.

- Rothrock, Addison M. and Wear, Jerrold D.: Effect of Carburetor-Mixture-Control and Supercharger Characteristics of Fuel Knock Under Simulated Sea-Level Flight Conditions. ARR (WR E-142), March 1943.
- Barnett, Henry C.: Lead Susceptibility of Paraffins, Cycloparaffins and Olefins. ARR 3E26 (WR E-223), May 1943.
- Biermann, Arnold E. and Corrington, Lester C.: Relation of Preignition and Knock to Allowable Engine Temperatures. ARR 3G14 (WR E-134), July 1943.
- Spencer, R. C. and Jones, A. W.: Knocking Tendency of an Air-Cooled Aircraft-Engine Cylinder with One and Two Spark Plugs. ARR 3G23 (WR E-133), July 1943.
- Branstetter, J. Robert and Meyer, Carl L.: Antiknock Effectiveness of Xylidines in Small-Scale Engines. MR (WR E-159), Aug. 1943.
- Bolz, Ray E. and Breitwieser, Roland: The Effect of Compression Ratio, Cooled Exhaust Gas Mixed with Inlet Air, and Inlet-Air Temperature on the Knock-Limited Performance of a Full-Scale Single-Cylinder Engine. ARR 4C31 (WR E-124), March 1944.
- Branstetter, J. Robert: Knock-Limited Performance of Blends of AN-F-28 Fuel Containing 2 Percent Aromatic Amines - I. MR (WR E-148), April 1944.
- Evvard, John C.; Imming, Harry S. and Genco, Russell S.: The Knock-Limited Blending Characteristics of Blends of Triptane and 28-R Aviation Gasoline. MR (WR E-242), April 1944.
- Jones, Anthony W. and Bull, Arthur W.:
 Knock-Limited Performance of Pure
 Hydrocarbons Blended with a Base
 Fuel in a Full-Scale Aircraft-Engine
 Cylinder. I Eight Paraffins, Two
 Olefins. ARR E4E25 (WR E-33), May
 1944.
- Olson, Walter T. and Kelly, Richard L.:
 The Low Temperature Solubility of
 Aniline, and Toluidines, and Some of
 Their n-Alkyl Derivatives in Aviation
 Gasoline. MR (WR E-162), June 1944.
- Alquist, Henry E. and Tower, Leonard K.: Knock-Limited Performance of Blends of AN-F-28 Fuel Containing 2 Percent Aromatic Amines - II. MR (WR E-149), June 1944.

- Spark-Ignition Relation to Engine Performance (Cont.)
- Bellman, Donald R.: The Knock-Limited Performance of Several Miscellaneous Fuels Blended with a Base Fuel - I. ACR E4G08 (WR E-213), July 1944.
- Barnett, Henry C.; Meyer, Carl L. and Jones, Anthony W.: Engine and Inspection Tests of Methyl tert-Butyl Ether as a Component of Aviation Fuel. ACR E4H03 (WR E-214), Aug. 1944.
- Alquist, Henry E. and Tower, Leonard K.: Knock-Limited Performance of Blends of AN-F-28 Fuel Containing 2 Percent Aromatic Amines - III. MR (WR E-150), Aug. 1944.
- Bell, Arthur H.: Continuous Use of Internal Cooling to Suppress Knock in Aircraft Engines Cruising at High Power. ARR E4H15 (WR E-55), Aug. 1944.
- Rothrock, Addison M.: Calculations of Intake-Air Cooling Resulting from Water Injection and of Water Recovery from Exhaust Gas. RB E4H26 (WR E-95), Aug. 1944.
- Wear, Jerrold D.; Held, Louis F. and Slough, James W.: Some Effects of Internal Coolants on Knock-Limited and Temperature-Limited Power as Determined in a Single-Cylinder Aircraft Test Engine. ARR E4H31, (WR E-24), Aug. 1944
- Harries, Myron L.; Nelson, R. Lee and Berguson, Howard E.: Effect of Water Injection on the Knock-Limited Performance of an Allison V-1710-99 Engine. MR (WR E-244), Sept. 1944.
- White, H. Jack and Engelman, Helmuth W.:
 Effect of Fuel Volatility on Performance of a Wright R-2600-8 Engine as
 Influenced by Mixture Distribution.
 ARR E4105 (WR E-87), Sept. 1944.
- Bull, Arthur W. and Jones, Anthony W.: Knock-Limited Performance of Pure Hydrocarbons Blended with a Base Fuel in a Full-Scale Aircraft-Engine Cylinder. II - Twelve Aromatics. ARR E4I09 (WR E-225), Sept. 1944.
- Alquist, Henry E. and Male, Donald W.:
 Trends in Surface-Ignition Temperatures. ARR E4I25 (WR E-94), Sept.
 1944.
- Meyer, Carl L. and Branstetter, J. Robert: The Knock-Limited Performance of Fuel Blends Containing Aromatics. Part I - Toluene, Ethylbenzene, and p-Xylene. ARR E4J05, Oct. 1944.

- Alquist, Henry E. and Tower, Leonard K.:
 The Effect of Compression Ratio on
 Knock Limits of High-Performance
 Fuels in a CFR Engine. I Blends of
 Triptane and 28-R Fuel. MR E4J10
 (WR E-245), Oct. 1944.
- Sanders, Newell D.; Hensley, Reece V. and Breitwieser, Roland: Experimental Studies of the Knock-Limited Blending Characteristics of Aviation Fuels. I -Preliminary Tests in an Air-Cooled Cylinder. ARR E4I28 (WR E-93), Oct. 1944.
- Barnett, Henry C. and Imming, Harry S.: The Effect of Engine Conditions on the Lead Susceptibility of Paraffinic Fuels. ARR E4J02 (WR E-226), Oct. 1944.
- Imming, Henry S.; Barnett, Henry C. and Genco, Russell S.: F-3 and F-4 Engine Tests of Triptane and Other High-Antiknock Components of Aviation Gasoline - Part II. MR E4K27 (WR E-246), Nov. 1944.
- Alquist, Henry E.: The Knock-Limited Performance of Several Fuels Blended with S-2 Reference Fuel. RB E4K03 (WR E-92), Nov. 1944.
- Alquist, Henry E. and Tower, Leonard K.: Knock-Limited Performance of Blends of AN-F-28 Fuel Containing 2 Percent Aromatic Amines - IV. MR E4L21 (WR E-152), Dec. 1944.
- Sanders, Newell D.: Significance of Alkylate-Replacement Values of Aviation Fuel Components. ARR E4L20 (WR E-58), Dec. 1944.
- Bellman, Donald R.; Moeckel, W. E. and Evvard, John C.: Knock-Limited Power Outputs from a CFR Engine Using Internal Coolants. I Monomethylamine and Dimethylamine. ARR E4L21 (WR E-228), Dec. 1944.
- Male, Donald W. and Evvard, John C.: Preignition-Limited Performance of Several Fuels. Rept. 811, 1945.
- Alquist, Henry E. and Tower, Leonard K.:
 Suitability of Ethers as Aviation Fuel
 Components. I The Knock-Limited
 Performance of Several Ethers Blended
 with AN-F-28 Fuel. CB E5A04 (WR
 E-207), Jan. 1945.
- Branstetter, Robert J. and Meyer, Carl L.: The Knock-Limited Performance of Fuel Blends Containing Aromatics. Part II - Isopropylbenzene, Benzene and o-Xylene. ARR E5A20 (WR E-229), Jan. 1945.

- Spark-Ignition Relation to Engine Performance (Cont.)
- Hensley, Reece V. and Breitwieser, Roland: Knock-Limited Blending Characteristics of Fuel Components in a Pratt & Whitney R-2800 Cylinder. II - Benzene, Toluene, Mixed Xylenes, and Cumene. MR E5B03 (WR E-251), Feb. 1945.
- Alquist, Henry E. and Tower, Leonard K.:
 The Effect of Compression Ratio on
 Knock Limits of High-Performance
 Fuel in a CFR Engine. III Blends of
 2,3-Dimethylpentane with 28-R. MR
 E5B10 (WR E-252), Feb. 1945.
- Cleaves, Alden P.: Ultraviolet Spectrochemical Analysis for Aromatics in Aircraft Fuels. ARR E5B14 (WR E-115), Feb. 1945.
- Meyer, Carl L. and Branstetter, J. Robert:
 The Knock-Limited Performance of
 Fuels Blends Containing Aromatics.
 Part III 1,3,5-Trimethylbenzene, tertButylbenzene and 1,2,4-Trimethylbenzene.
 ARR E5D16, April 1945.
- Meyer, Carl L. and Branstetter, J. Robert:
 The Knock-Limited Performance of
 Fuel Blends Containing Aromatics.
 Part IV Data for m-Diethylbenzene,
 1-Ethyl-4-Methylbenzene and secButylbenzene Together with a Summarization of Data for 12 Aromatic Hydrocarbons. ARR E5D16a, April 1945.
- Jones, Anthony W.; Bull, Arthur W. and Jonash, Edmund R.: Knock-Limited Performance of Six Aromatic Amines Blended with a Base Fuel in a Full-Scale Aircraft-Engine Cylinder. MR E5D04 (WR E-165), April 1945.
- Tauschek, Max J. and Lietzke, A. F.: Effect of Fuel Volatility and Mixture Temperature on the Knocking Characteristics of an Allison Single-Cylinder Test. MR E5D24 (WR E-257), April 1945.
- Tower, Leonard K.: Knock-Limited Performance of Blends of AN-F-28 Fuel Containing 4 Percent Aliphatic Amines. RB E5D17, April 1945.
- Evvard, John C. and Branstetter, J. Robert: A Correlation of the Effects of Compression Ratio and Inlet-Air Temperature on the Knock Limits of Aviation Fuels in a CFR Engine - I. ACR E5D20, May 1945.
- Male, Donald W.: The Effect of Six Aromatic Amines on the Preignition-Limited Performance of 28-R Aviation Fuel in a CFR Engine. MR E5E12a (WR E-180), May 1945.

- Branstetter, J. Robert: Comparison of the Knock-Limited Performance of Triptane with 23 Other Purified Hydrocarbons. MR E5E15 (WR E-259), May 1945.
- Tauschek, Max J.; Corrington, Lester C. and Huppert, Merle C.: Nitrous Oxide Supercharging of an Aircraft Engine Cylinder. MR E5F26 (WR E-199), June 1945.
- Nelson, R. Lee; Harries, Myron L. and Brun, Rinaldo J.: Effect of Internal Coolants on the Knock-Limited Performance of an Allison V-1710-99 Engine with a Compression Ratio of 6.0. MR E5F30 (WR E-260), June 1945.
- Alquist, Henry E. and Tower, Leonard K.: Knock-Limited Performance of Blends of AN-F-28 Fuel Containing 2 Percent Aromatic Amines. MR E5H06 (WR E-151), Aug. 1945.
- Vandeman, J. E. and Heinicke, O. H.: Effect of Water-Alcohol Injection and Maximum-Economy Spark Advance on Knock-Limited Performance and Fuel Economy of a Wright R-3350 Rear-Row Cylinder. MR E5H12 (WR E-264), Aug. 1945.
- Wilson, Robert W.; Richard, Paul H. and Brown, Kenneth D.: Correlation of the Characteristics of Single-Cylinder and Flight Engines in Tests of High-Performance Fuels in a Pratt & Whitney R-1830094 Engine. I - Cooling Characteristics. MR E5J04 (WR E-271), Oct. 1945.
- Brown, Kenneth D.; Richard, Paul H. and Wilson, Robert W.: Correlation of the Characteristics of Single-Cylinder and Flight Engines in Tests of High-Performance Fuels in a Pratt & Whitney R-1830-94 Engine. II Knock-Limited Charge-Air Flow and Cylinder Temperatures. MR E5J12 (WR E-272), Oct. 1945.
- Bellman, Donald R.; Moeckel, W. E. and Evvard, John C.: Knock-Limited Power Outputs from a CFR Engine Using Internal Coolants. II - Six Aliphatic Amines. ACR E5H31 (WR E-219), Oct. 1945.
- Meyer, Carl L.: The Knock-Limited Performance of S Reference Fuel Plus 2 Milliliters of Triethylthallium per Gallon. RB E5J15 (WR E-112), Nov. 1945.
- Stricker, Edward G.; Wear, Jerrold D. and Hensley, Reece V.: Lead Susceptibility of Several Fuels as Determined in an Air-Cooled Aircraft-Engine Cylinder. RB E6A07 (WR E-220), Jan. 1946.

- Spark-Ignition Relation to Engine Performance (Cont.)
- Kinney, George R. and Niemi, Richard O.:
 The Effect of Ethylene Dibromide on
 the Knock-Limited Performance of
 Leaded and Nonleaded S Reference
 Fuel. MR E6B12 (WR E-183), Feb.
 1946.
- Bull, Arthur W.; Stricker, Edward G. and Wear, Jerrold D.: Knock-Limited Performance of N-Methylaniline and Xylidine Blends in an Air-Cooled Aircraft Cylinder. ARR E6A28 (WR E-109), Feb. 1946.
- Jones, Anthony W.; Bull, Arthur W. and Jonash, Edmund R.: Knock-Limited Performance of Pure Hydrocarbons Blended with a Base Fuel in a Full-Scale Aircraft-Engine Cylinder. III - Four Aromatics, Six Ethers. ARR E6B14, March 1946.
- Barnett, Henry C.: An Evaluation of the Knock-Limited Performance of Triptane. MR E6B20 (WR E-276), March 1946.
- Jonash, Edmund R.; Meyer, Carl L. and Branstetter, J. Robert: Knock-Limited Performance Tests of 2,2,3,4-Tetramethylpentane, 2,3,3,4-Tetramethylpentane, 3,4,4-Trimethyl-2-Pentene and 2,3,4-Trimethyl-2-Pentene in Small-Scale and Full-Scale Cylinders. ARR E6C04 (WR E-236), March 1946.
- Meyer, Carl L. and Branstetter, J. Robert:
 The Knock-Limited Performance of
 Fule Blends Containing Aromatics.
 V n-Propylbenzene, n-Butylbenzene,
 Isobutylbenzene m-Xlyene, and 1-Isopropyl-4-Methylbenzene. ARR E6C05,
 March 1946.
- Meyer, Carl L.: The Knock-Limited Performance of Fuel Blends Containing Spiropentane, Methylenecyclobutane, Di-tert-Butyl Ether, Methyl tert-Butyl Ether, and Triptane. RB E6D22 (WR E-222), May 1946.
- Alquist, Henry E.; O'Dell, Leon and Evvard, John C.: A Correlation of the Effects of Compression Ratio and Inlet-Air Temperature on the Knock Limits of Aviation Fuels in a CFR Engine II. ARR E6E13, June 1946.
- Cook, Harvey A.; Held, Louis F. and Pritchard, Ernest I.: Comparison of Relative Sensitivities of the Knock Limits of Two Fuels to Six Engine Variables. TN 1117, Aug. 1946.
- Male, Donald W.: The Effect of Engine Variables on the Preignition-Limited Performance of Three Fuels. TN 1131, Sept. 1946.

- Imming, Harry S. and Bellman, Donald R.:
 Knock-Limited Power Outputs from a
 CFR Engine Using Internal Coolants.
 III Four Alkyl Amines, Three Alkanolamines, Six Amides, and Eight Heterocyclic Compounds. RM E6L05a, Feb.
 1947.
- Wear, Jerrold D. and Sanders, Newell D.:
 Experimental Studies of the KnockLimited Blending Characteristics of
 Aviation Fuels. II Investigation of
 Leaded Paraffinic Fuels in an AirCooled Cylinder. TN 1374, July 1947.
- Michel, Donald J.; Hickel, Robert O. and Voit, Charles H.: Performance of a Double-Row Radial Aircraft Engine with Three Methods of Safety-Fuel Injection. TN 1413, Aug. 1947.
- Drell, J. L. and Wear, J. D.: Experimental Studies of the Knock-Limited Blending Characteristics of Aviation Fuels. III - Aromatics and Cycloparaffine. TN 1416, Aug. 1947.
- Osterstrom, Gordon E.: Knocking Combustion Observed in a Spark-Ignition Engine with Simultaneous Direct and Schlieren High-Speed Motion Pictures and Pressure Records. TN 1614, June 1948.
- Genco, R. S. and Drell, I. L.: Knock-Limited Performance of Several Branched Paraffins and Olefins. TN 1616, June 1948.
- Lord, Albert M.; Heinicke, Orville H. and Stricker, Edward G.: Effect of Exhaust Pressure on Knock-Limited Performance of an Air-Cooled Aircraft-Engine Cylinder. TN 1617, June 1948.
- Corrington, Lester C. and Fisher, William F.: Effect of Preignition on Cylinder Temperatures, Pressures, Power Output, and Piston Failures. TN 1637, June 1948.
- Barnett, Henry C. and Clarke, Thomas C.: An Evaluation of Proposed Reference Fuel Scales for Knock Rating. TN 1619, July 1948.
- Compression-Ignition (Diesel) (3.4.3.1.2)
- Tausz, J. and Schulte, F.: Determination of Ignition Points of Liquid Fuels Under Pressure. TM 299, Jan. 1925.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part III - A Discussion of Fuel Mixing and Ignition, with Special Reference to Engines with Precombustion Chambers. TM 358, April 1926.

- Compression-Ignition (Diesel) Relation to Engine Performance (Cont.)
- Sauter, J.: Determining the Efficiency of Atomization by Its Fineness and Uniformity. TM 396, Jan. 1927.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles. Part II. TM 403, March 1927.
- Joachim, Wm. F. and Rothrock, A. M.: Fuel Vapor Pressures and the Relation of Vapor Pressure to the Preparation of Fuel for Combustion in Fuel Injection Engines. Rept. 321, 1929.
- Rothrock, A. M. and Lee, D. W.: Some Characteristics of Fuel Sprays from Open Nozzles. TN 356, Nov. 1930.
- Spanogle, J. A. and Whitney, E. G.: The Effectiveness of a Double-Stem Injection Valve in Controlling Combustion in a Compression-Ignition Engine. TN 402, Dec. 1931.
- Lee, Dana W.: The Effect of Nozzle Design and Operating Conditions on the Atomization and Distribution of Fuel Sprays. Rept. 425, 1932.
- Lee, Dana W.: Experiments on the Distribution of Fuel in Fuel Sprays. Rept. 438, 1932.
- Spanogle, J. A.: Compression-Ignition Engine Tests of Several Fuels. TN 418, May 1932.
- Lee, Dana W. and Spencer, Robert C.: Photomicrographic Studies of Fuel Sprays. Rept. 454, 1933.
- Lee, Dana W.: A Comparison of Fuel Sprays from Several Types of Injection Nozzles. Rept. 520, 1935.
- Gerrish, Harold C. and Foster, Hampton H.: Hydrogen as an Auxiliary Fuel in Compression-Ignition Engines. Rept. 535, 1935.
- Lee, Dana W.: Measurements of Fuel Distribution Within Sprays for Fuel-Injection Engines. Rept. 565, 1936.
- Gerrish, Harold C. and Ayer, Bruce E.: Influence of Fuel-Oil Temperature on the Combustion in a Prechamber Compression-Ignition Engine. TN 565, April 1936.
- Michailova, M. N. and Neumann, M. B.: The Cetene Scale and the Induction Period Preceding the Spontaneous Ignition of Diesel Fuels in Bombs. TM 813, Dec. 1936.
- Selden, Robert F.: Auto-Ignition and Combustion of Diesel Fuel in a Constant-Volume Bomb. Rept. 617, 1938.

- Selden, Robert F.: A Comparison of Ignition Characteristics of Diesel Fuels as Determined in Engines and in a Constant-Volume Bomb. TN 710, June 1939.
- Moore, Charles S. and Foster, Hampton H.: Compression-Ignition Engine Performance with Undoped and Doped Fuel Oils and Alcohol Mixtures. TN 707, Aug. 1939.

TURBINE ENGINES, RAM JETS, AND PULSE JETS (3.4,3.2)

- Bolz, Ray E. and Meigs, John B.: Fuel Tests on an I-16 Jet-Propulsion Engine at Static Sea-Level Conditions. RM E7B01, April 1947.
- Cleaves, Alden P. and Carver, Mildred S.:
 A Spectrophotometric Method for Identification and Estimation of Alkylnaphthalenic-Type Hydrocarbons in Kerosene. TN 1243, April 1947.
- Childs, J. Howard; McCafferty, Richard J. and Surine, Oakley W.: Effect of Combustor-Inlet Conditions on Performance of an Annular Turbojet Combustor. TN 1357, July 1947.
- Cleaves, Alden P.; Carver, Mildred S. and Hibbard, Robert R.: Quantitative Analysis of Ternary Mixtures of Naphthalene, 1-Methylnaphthalene, and 2-Methylnaphthalene. TN 1608, June 1948.
- Busch, Arthur M.; Cleaves, Alden P. and Hibbard, Robert R.: A Method for Determination of Aromatics in 150° to 300°C Fractions of Crude Petroleum by Measurement of Aniline-Point Rise. TN 1641, June 1948.

ROCKETS (INCLUDES FUEL AND OXIDANT) (3.4.3.3)

- Sanger, Eugen: Recent Results in Rocket Flight Technique. TM 1012, April 1942.
- Busemann, Adolf: Rockets Using Liquid Oxygen. TM 1144, April 1947.
- Zborowski, Helmut: Rocket Power Plants Based on Nitric Acid and Their Specific Propulsive Weights. TM 1145, May 1947.
- Walter, Hellmuth: Report on Rocket Power Plants Based on T-Substance. TM 1170, July 1947.
- Huff, Vearl N. and Calvert, Clyde S.:
 Charts for the Computation of Equilibrium Composition of Chemical Reactions in the Carbon-Hydrogen-Oxygen-Nitrogen System at Temperatures from 2000° to 5000° K. TN 1653, July 1948.

Combustion

(3.5)

- Dickinson, H. C. and Newell, F. B.: A High-Speed Engine Pressure Indicator of the Balanced Diaphragm Type. Rept. 107, 1921.
- Neumann, Kurt: Experiments on Self-Ignition of Liquid Fuels. TM 391, Dec. 1926.
- Beardsley, Edward G.: The NACA Photographic Apparatus for Studying Fuel Sprays from Oil Engine Injection Valves and Test Results from Several Researches. Rept. 274, 1927.
- Pahl, H.: Effect of Oxygen on the Ignition of Liquid Fuels. TM 497, Jan. 1929.
- Duchêne, M. R.: Contribution to the Study of Normal Burning in Gaseous Carbureted Mixtures. Part I. TM 547, Jan. 1930.
- Duchêne, M. R.: Contribution to the Study of Normal Burning in Gaseous Carbureted Mixtures. Part II. TM 548, Jan. 1930.
- Spanogle, J. A. and Collins, John H., Jr.: A
 Balanced Diaphragm Type of Maximum
 Cylinder Pressure Indicator. TN 359,
 Dec. 1930.
- Sokolik, A. S.: Self-Ignition and Combustion of Gases. TM 1025, Aug. 1942.
- Draper, C. S.; Taylor, E. S.; Lancor, J. H. and Coffey, R. T.: Development of a Detonation Detector Suitable for Use in Flight. TN 977, Dec. 1944.
- Ebersole, Earl R. and Barnett, Henry C.: Smoking Characteristics of Various Fuels. I - Open-Cup Smoke Tests. MR E5F20 (WR E-190), June 1945.

GENERAL COMBUSTION RESEARCH

(3.5.1)

- Silsbee, F. B.; Loeb, L. B. and Fonseca, E. L.: Heat Energy of Various Ignition Sparks. Rept. 56, 1919.
- Gorton, W. S.: The Subsidiary Gap as a Means for Improving Ignition. Rept. 57, 1919.

- Kemble, E. C.: Calculation of Low-Pressure Indicator Diagrams. Rept. 50, 1920.
- Silsbee, F. B.; Loeb, L. B.; Sawyer, L. G. and Fonseca, E. L.: Spark Plug Defects and Tests. Rept. 51, 1920.
- Loeb, L. B. and Silsbee, F. B.: Effect of Temperature and Pressure on the Sparking Voltage. Rept. 54, 1920.
- Stevens, F. W.: A Constant Pressure Bomb. Rept. 176, 1923.
- Silsbee, F. B.: The Effect of Electrode Temperature on the Sparking Voltage of Short Spark Gaps. Rept. 179, 1923.
- Ziembinske, S.: Possible Improvements in Gasoline Engines. TM 182, Jan. 1923.
- Nusselt, Wilhelm and Pothmann, P.: Spontaneous Combustion of Hydrogen. TM 241, Dec. 1923.
- Brode, R. B.; Randolph, D. W. and Silsbee, F. B.: Electrical Characteristics of Spark Generators for Automotive Ignition. Rept. 241, 1926.
- Stevens, F. W.: The Gaseous Explosive Reaction - The Effect of Inert Gases. Rept. 280, 1927.
- Hicks, Chester W.: The Measurement of Maximum Cylinder Pressures. Rept. 294, 1928.
- Stevens, F. W.: The Gaseous Explosive Reaction - A Study of the Kinetics of Composite Fuels. Rept. 305, 1929.
- Stevens, F. W.: The Gaseous Explosive Reaction at Constant Pressure - The Reaction Order and Reaction Rate. Rept. 337, 1929.
- Becker, R.: Impact Waves and Detonation. Part I. TM 505, March 1929.
- Becker, R.: Impact Waves and Detonation. Part II. TM 506, March 1929.
- Peters, Melvill F.; Summerville, Wayne L. and Davis, Merlin: An Investigation of the Effectiveness of Ignition Sparks. Rept. 359, 1930.

- General Combustion Research (Cont.)
- Stevens, F. W.: The Gaseous Explosive Reaction - The Effect of Pressure on the Rate of Propagation of the Reaction Zone and Upon the Rate of Molecular Transformation. Rept. 372, 1930.
- Wendlandt, Rudolf: Experimental Investigations Concerning the Limits of Detonation in Gaseous Mixtures. Part II. TM 554, Feb. 1930.
- Duchene, R.: Combustion of Gaseous Mixtures. TM 694, Nov. 1932.
- Stevens, F. W.: The Gaseous Explosive Reaction at Constant Pressure - Further Data on the Effect of Inert Gases. TN 438, Dec. 1932.
- Draper, C. S.: The Physical Effects of Detonation in a Closed Cylindrical Chamber. Rept. 493, 1934.
- Fiock, Ernest F. and King, H. Kendall: The Effect of Water Vapor on Flame Velocity in Equivalent CO-O₂ Mixtures. Rept. 531, 1935.
- Fiock, Ernest F. and Roeder, Carl H.: The Soap-Bubble Method of Studying the Combustion of Mixtures of CO and O2. Rept. 532, 1935.
- Cohn, Mildred and Spencer, Robert C.: Combustion in a Bomb with a Fuel-Injection System. Rept. 544, 1935.
- Fiock, Ernest F. and Roeder, Carl H.: Some Effects of Argon and Helium upon Explosions of Carbon Monoxide and Oxygen. Rept. 553, 1936.
- Marvin, Charles F., Jr.; Wharton, Armistead and Roeder, Carl H.: Further Studies of Flame Movement and Pressure Development in an Engine Cylinder. Rept. 556, 1936.
- Langweiler, Heinz: The Hydrodynamic Theory of Detonation. TM 899, June 1939.
- Fiock, Ernest F.; Marvin, Charles F., Jr.; Caldwell, Frank R. and Roeder, Carl H.: Flame Speeds and Energy Considerations for Explosions in a Spherical Bomb. Rept. 682, 1940.
- Miller, Cearcy D.: A Study by High-Speed Photography of Combustion and Knock in a Spark-Ignition Engine. Rept. 727, 1942.
- Semenov, N. N.: Thermal Theory of Combustion and Explosion. TM 1024, Aug. 1942.
- Neill, Thomas T.: Report on Survey of Aircraft Engine Ignition Developments. ACR, Aug. 1942.

- Semenov, N. N.: Thermal Theory of Combustion and Explosion. III Theory of Normal Flame Propagation. TM 1026, Sept. 1942.
- Gerrish, Harold C. and Meem, J. Lawrence, Jr.: The Measurement of Fuel-Air Ratio by Analysis of the Oxidized Exhaust Gas. Rept. 757, 1943.
- Miller, Cearcy D. and Logan, Walter O., Jr.: Preknock Vibrations in a Spark-Ignition Engine Cylinder as Revealed by High-Speed Photography. Rept. 785, 1944.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr. and Tuck, Vivian C.: The Oxidation of Exhaust Gases at Room Temperature. ARR E5B01A (WR E-62), Feb. 1945.
- Gilbert, Mitchell; Haddock, Gordon and Metzler, Allen: A Study of Combustion in a Flowing Gas. TN 1037, April 1946.
- Zeldovich, Y. and Semenov, N.: Kinetics of Chemical Reactions in Flames. TM 1084, June 1946.
- Turner, L. Richard and Lord, Albert M.:
 Thermodynamic Charts for the Computation of Combustion and Mixture Temperatures at Constant Pressure. TN 1086, June 1946.
- Shelkin, K. I.: On Combustion in a Turbulent Flow. TM 1110, Feb. 1947.
- Damkohler, Gerhard: The Effect of Turbulence on the Flame Velocity in Gas Mixtures. TM 1112, April 1947.
- Bollinger, Lowell M. and Williams, David T.: Experiments on Stability of Bunsen-Burner Flames for Turbulent Flow. TN 1234, June 1947.
- Hirshfeld, M. A. and Miller, Cearcy D.: Instantaneous Ultraviolet Knock Spectra Correlated with High-Speed Photographs. TN 1408, Aug. 1947.
- Leary, W. A.; Taylor, E. S.; Taylor, C. F. and Jovellanos, J. U.: A Rapid Compression Machine Suitable for Studying Short Ignition Delays. TN 1332, Feb. 1948.
- Leary, W. A.; Taylor, E. S.; Taylor, C. F. and Jovellanos, J. U.: The Effect of Fuel Composition, Compression Pressure, and Fuel-Air Ratio on the Compression-Ignition Characteristics of Several Fuels. TN 1470, March 1948.
- Hill, Francis U. and Mark, Herman: Performance of Experimental Turbojet-Engine Combustor. I Performance of a One-Eighth Segment of an Experimental Turbojet-Engine Combustor. RM E7J13, April 1948.

- General Combustion Research (Cont.)
- Reynolds, Thaine W. and Ebersole, Earl R.: Effect of Hydrocarbon Type and Chain Length on Uniform Flame Movement in Quiescent Fuel-Air Mixtures. TN 1609, June 1948.
- Huff, Vearl N. and Calvert, Clyde S.: Charts for the Computation of Equilibrium Composition of Chemical Reactions in the Carbon-Hydrogen-Oxygen-Nitrogen System at Temperatures from 2000° to 5000° K. TN 1653, July 1948.
- Bogart, Donald; Okrent, David and Turner, L. Richard: Thermodynamic Charts for the Computation of Fuel Quantity Required for Constant-Pressure Combustion with Diluents. TN 1655, July 1948.
- Hess, Robert V.: Study of Unsteady Flow Disturbances of Large and Small Amplitudes Moving Through Supersonic or Subsonic Steady Flows. TN 1878, May 1949.
- McCann, W. J. (Revised by L. R. Turner and Emory A. Bauer): Thermodynamic Charts for Internal-Combustion-Engine Fluids. TN 1883, July 1949.

TURBULENT-FLOW (3.5.1.2)

- Haddock, Gordon W. and Childs, J. Howard:
 Preliminary Investigation of Combustion in Flowing Gas with Various Turbulence Promoters. RM E8C02, June 1948.
- Bollinger, Lowell M. and Williams, David T.: Effect of Reynolds Number in the Turbulent Flow Range on Flame Speed of Bunsen-Burner Flames. TN 1707, Sept. 1948.

DETONATION (3.5.1.3)

- Boerlage, G. D.: Detonation and Autoignition. Some Considerations on Methods of Determination. TM 843, Dec. 1937.
- Barnett, Henry C.: An Evaluation of the Knock-Limited Performance of Triptane. MR E6B20 (WR E-276), March 1946.
- Guderley, G.: Nonstationary Gas Flow in Thin Pipes of Variable Cross Section. TM 1196, Dec. 1948.

EFFECTS OF FUEL ATOMIZATION (3.5.1.4)

Sauter, J.: Determining the Efficiency of Atomization by Its Fineness and Uniformity. TM 396, Jan. 1927.

- Spanogle, J. A. and Whitney, E. G.: The Effectiveness of a Double-Stem Injection Valve in Controlling Combustion in a Compression-Ignition Engine. TN 402, Dec. 1931.
- White, H. Jack and Engelman, Helmuth W.: Effect of Fuel Volatility on Performance of a Wright R-2600-8 Engine as Influenced by Mixture Distribution. ARR E4105 (WR E-87), Sept. 1944.
- Tauschek, Max J. and Lietzke, A. F.: Effect of Fuel Volatility and Mixture Temperature on the Knocking Characteristics of an Allison Single-Cylinder Test Engine. MR E5D24 (WR E-257), April 1945.

IGNITION OF GASES (3.5.1.6)

- Biermann, Arnold E.: Effect of Spark-Timing Regularity on the Knock Limitations of Engine Performance. TN 651, May 1938.
- Swett, Clyde C., Jr.: Investigation of Spark Gaps Subjected to Altitude and Air-Velocity Conditions. RM E8I17, Nov. 1948.
- Swett, Clyde C., Jr.: Spark Ignition of Flowing Gases. I - Energies To Ignite Propane - Air Mixtures in Pressure Range of 2 to 4 Inches Mercury Absolute. RM E9E17, Aug. 1949.

OPERATING CONDITIONS AND COMBUSTION CHAMBER GEOMETRY

(3.5.2)

- Margoulis, W.: Abacus Giving the Variation of the Mean Pressure of an Aviation Engine as a Function of Its Speed of Rotation. TM 12, March 1921.
- Sparrow, Stanwood W.: The Effect of Changes in Compression Ratio upon Engine Performance. Rept. 205, 1926.
- Paton, C. R. and Kemper, Carlton: Power Output and Air Requirements of a Two-Stroke Cycle Engine for Aeronautical Use. Rept. 239, 1926.
- Kemper, Carlton: Improving the Performance of a Compression Ignition Engine by Directing Flow of the Inlet Air. TN 242, July 1926.

- Effect of Engine Operating Conditions and Combustion Chamber Geometry (Cont.)
- Gardiner, Arthur W. and Schey, Oscar W.:
 The Comparative Performance of an
 Aviation Engine at Normal and High
 Inlet Air Temperatures. Rept. 277,
 1927.
- Brooks, Donald B.: Correcting Engine Tests for Humidity. TN 309, June 1929.
- Schey, Oscar W.: The Effect of Fuel Consumption on Cylinder Temperatures and Performance of a Cowled Wright J-5 Engine. TN 328, Nov. 1929.
- Spanogle, J. A. and Moore, C. S.: Performance of a Compression-Ignition Engine with a Precombustion Chamber Having High-Velocity Air Flow. TN 396, Oct. 1931.
- Brooks, D. B. and Garlock, E. A.: The Effect of Humidity on Engine Power at Altitude. Rept. 426, 1932.
- Spanogle, J. A. and Moore, C. S.: Considerations of Air Flow in Combustion Chambers of High-Speed Compression-Ignition Engines. TN 414, April 1932.
- Moore, Charles S. and Collins, John H., Jr.: Prechamber Compression-Ignition Engine Performance. Rept. 577, 1937.
- Kurtz, Oskar: Research and Design Problems Introduced by Increased Power Output. TM 840, Oct. 1937.
- Schey, Oscar W. and Clark, J. Denny: Fuel Consumption of a Carburetor Engine at Various Speeds and Torques. TN 654, June 1938.
- Rogowski, A. R. and Bouchard, C. L.: Scavenging a Piston-Ported Two-Stroke Cylinder. TN 674, Nov. 1938.
- Rothrock, A. M. and Biermann, Arnold E.: Correlation of Knocking Characteristics of Fuels in an Engine Having a Hemispherical Combustion Chamber. TN 768, July 1940.
- Sanders, J. C.; Hilgendorf, J. A. and Peters, M. D.: The Effect of Continuous Knock on the Endurance of an Aircraft Engine Cylinder. ARR 4C16 (WR E-121), March 1944.
- Nielsen, Jack N.: Compressibility Effects on Heat Transfer and Pressure Drop in Smooth Cylindrical Tubes. ARR L4C16 (WR L-179), March 1944.
- Sanders, J. C. and Peters, M. D.: The Effect of High Temperature of the Cylinder Head on the Knocking Tendency of an Air-Cooled Engine Cylinder. ARR E5A29a (WR E-39), Feb. 1945.

- Cook, Harvey A. and Brightwell, Virginia L.: Relation Between Fuel Economy and Crank Angle for the Maximum Rate of Pressure Rise. MR E5E21 (WR E-179), May 1945.
- Cook, Harvey A.; Held, Louis F. and Pritchard, Ernest I.: Comparison of Relative Sensitivities of the Knock Limits of Two Fuels to Six Engine Variables. TN 1117, Aug. 1946.
- Cook, Harvey A.; Heinicke, Orville H. and Haynie, William H.: Spark-Timing Control Based on Correlation of Maximum-Economy Spark Timing, Flame-Front Travel, and Cylinder Pressure Rise. TN 1217, Feb. 1947.
- Damköhler, Gerhard: The Effect of Turbulence on the Flame Velocity in Gas Mixtures. TM 1112, April 1947.
- Livengood, James C. and Eppes, James V. D.: Effect of Changing Manifold Pressure, Exhaust Pressure, and Valve Timing on the Air Capacity and Output of a Four-Stroke Engine Operated with Inlet Valves of Various Diameters and Lifts. TN 1366, Dec. 1947.
- Hill, Francis U. and Mark, Herman: Performance of Experimental Turbojet-Engine Combustor. I Performance of a One-Eighth Segment of an Experimental Turbojet-Engine Combustor. RM E7J13, April 1948.
- Dittrich, Ralph T.: Effects of Fuel-Nozzle Carbon Deposition on Combustion Efficiency of Single Tubular-Type, Reverse-Flow, Combustor at Simulated Altitude Conditions. TN 1618, June 1948.
- Haddock, Gordon W. and Childs, J. Howard:
 Preliminary Investigation of Combustion in Flowing Gas with Various
 Turbulence Promoters. RM E8C02,
 June 1948.

RECIPROCATING ENGINES (3.5.2.1)

- Heller, L. A.: The 300 H.P. Benz Aircraft Engine. TN 34, Jan. 1921.
- Sparrow, Stanwood W.: The Background of Detonation. TN 93, April 1922.
- Riedler, A.: Disturbing Effect of Free Hydrogen on Fuel Combustion in Internal Combustion Engines. TN 133, March 1923.
- Kuehn, Dr. R.: Atomization of Liquid Fuels
 I Relation Between Atomization and
 Combustion. Methods Employed for
 Determining the Size of Particles and
 Small Drops. Choice of Experimental
 Method. TM 329, Sept. 1925.

- Reciprocating Engines (Cont.)
- Kuehn, Dr. R.: Atomization of Liquid Fuels
 II Description of Apparatus, Fuels
 Tested, Atomization Experiments, Discharge Measurements, Atomization.
 TM 330, Sept. 1925.
- Kuehn, Dr. R.: Atomization of Liquid Fuels

 III Critical Discussion of Experimental Results. Mixing the Atomized
 Fuel with Air. TM 331, Sept. 1925.
- Marvin, Charles F., Jr.: Combustion Time in the Engine Cylinder and Its Effect on Engine Performance. Rept. 276, 1927.
- Neumann, Kurt: The Transformation of Heat in an Engine. TM 509, April 1929.
- Wendlandt, Rudolf: Experimental Investigations Concerning the Limits of Detonation in Gaseous Mixtures. Part I. TM 553, Feb. 1930.
- Marvin, Charles F., Jr. and Best, Robert D.: Flame Movement and Pressure Development in an Engine Cylinder. Rept. 399, 1931.
- Haenlein, A.: Disintegration of a Liquid Jet. TM 659, Feb. 1932.
- Schnauffer, Kurt: Combustion Velocity of Benzine-Benzol-Air Mixtures in High-Speed Internal-Combustion Engines. TM 668, April 1932.
- Taylor, E. S.: The Importance of Auto-Ignition Lag in Knocking. TN 452, March 1933.
- Wawrziniok, Professor: Pressure Rise, Gas Vibrations and Combustion Noises During the Explosion of Fuels. TM 711, June 1933.
- Serruys, Max: Experimental Study of Ignition by Hot Spot in Internal Combustion Engines. TM 873, Aug. 1938.
- Schmidt, Fritz A. F.: Theoretical and Experimental Study of Ignition Lag and Engine Knock. TM 891, March 1939.
- Zinner, Karl: Engine Knock and Combustion Chamber Form. TM 914, Oct. 1939.
- Hastings, Charles E.: Ionization in the Knock Zone of an Internal-Combustion Engine. TN 774, Sept. 1940.
- Rothrock, A. M.; Spencer, R. C. and Miller, Cearcy D.: A High-Speed Motion-Picture Study of Normal Combustion, Knock, and Preignition in a Spark Ignition Engine. Rept. 704, 1941.

- Munger, Maurice; Wilsted, H. D. and Mulcahy, B. A.: The Effect of Valve Cooling upon Maximum Permissible Engine Output as Limited by Knock. TN 861, Sept. 1942.
- Rubert, K. F.; Corson, Blake W., Jr. and Nielsen, Jack: The Advantages of Uniform Fuel Distribution for Air-Cooled Engines from Considerations of Cooling Requirements and Fuel Economy. CB 3L07 (WR L-338), Dec. 1943.
- Miller, Cearcy D.: Relation Between Spark Ignition Engine Knock, Detonation Waves and Autoignition as Shown by High-Speed Photography. Rept. 855, 1946.
- Miller, Cearcy D.; Olsen, H. Lowell; Logan, Walter O. and Ostrestrom, Gordon E.: Analysis of Spark-Ignition Engine Knock as Seen by Photographs Taken at 200,000 Frames per Second. Rept. 857, 1946.
- Leary, W. A.; Taylor, E. S.; Taylor, C. F. and Jovellanos, J. U.: A Rapid Compression Machine Suitable for Studying Short Ignition Delays. TN 1332, Feb. 1948.
- Leary, W. A.; Taylor, E. S.; Taylor, C. F. and Jovellanos, J. U.: The Effect of Fuel Composition, Compression Pressure, and Fuel-Air Ratio on the Compression-Ignition Characteristics of Several Fuels. TN 1470, March 1948.
- Lord, Albert M.; Heinicke, Orville H. and Stricker, Edward G.: Effect of Exhaust Pressure on Knock-Limited Performance of an Air-Cooled Aircraft-Engine Cylinder. TN 1617, June 1948.

Spark-Ignition (3.5.2.1.1)

- Silsbee, F. B.; Loeb, L. B. and Fonseca, E. L.: Heat Energy of Various Ignition Sparks. Rept. 56, 1919.
- Silsbee, F. B.; Loeb, L. B.; Sawyer, L. G. and Fonseca, E. L.: Spark Plug Defects and Tests. Rept. 51, 1920.
- Silsbee, F. B.: Characteristics of High-Tension Magnetos. I - Cycle of Operation of Jump-Spark Ignition Systems. II - Transformation Ratio and Coupling in High-Tension Magnetos. Rept. 58, 1920.
- Sparrow, S. W.: Increase in Maximum Pressures Produced by Preignition in Internal Combustion Engines. TN 14, Aug. 1920.
- Dickinson, H. C. and Newell, F. B.: A High-Speed Engine Pressure Indicator of the Balanced Diaphragm Type. Rept. 107, 1921.

- Spark-Ignition (Cont.)
- Silsbee, F. B.: Simplified Theory of the Magneto. Rept. 123, 1921.
- Kook, E.: Simple Means for Saving Fuel on Traffic Flights. TM 26, June 1921.
- Schwager, Otto: Preliminary Calculations of Cylinder Dimensions for Aircraft Engines. TM 38, Sept. 1921.
- Sparrow, Stanwood W. and Lee, Stephen M.: Comparing Maximum Pressures in Internal Combustion Engines. TN 101, June 1922.
- Randolph, D. W. and Silsbee, F. B.: Flame Speed and Spark Intensity. Rept. 187, 1924.
- Matthews, Robertson and Gardiner, Arthur W.: The Influence of Inlet Air Temperature and Jacket Water Temperature on Initiating Combustion in a High-Speed Compression Ignition Engine. TN 185, March 1924.
- Silsbee, F. B.: The Sparking Voltage of Spark Plugs. Rept. 202, 1925.
- Ricardo, H. R.: Some Notes on Gasoline-Engine Development. TM 420, July 1927.
- Spanogle, J. A. and Collins, John H., Jr.: A Balanced Diaphragm Type of Maximum Cylinder Pressure Indicator. TN 359, Dec. 1930.
- Darnell, T. H.: The Automotive Ignition Coil. Rept. 374, 1931.
- Rothrock, A. M.: The NACA Apparatus for Studying the Formation and Combustion of Fuel Sprays and the Results from Preliminary Tests. Rept. 429, 1932.
- Rothrock, A. M. and Waldron, C. D.: Effect of Engine Operating Conditions on the Vaporization of Safety Fuels. TN 430, Aug. 1932.
- Marvin, Charles F., Jr.; Caldwell, Frank R. and Steele, Sydney: Infrared Radiation from Explosions in a Spark-Ignition Engine. Rept. 486, 1934.
- Rothrock, A. M. and Cohn, Mildred: Some Factors Affecting Combustion in an Internal-Combustion Engine. Rept. 512, 1934.
- Marvin, Charles F., Jr.; Wharton, Armistead and Roeder, Carl H.: Further Studies of Flame Movement and Pressure Development in an Engine Cylinder. Rept. 556, 1936.

- Rothrock, A. M. and Spencer, R. C.: A Preliminary Study of Flame Propagation in a Spark-Ignition Engine. TN 603, June 1937.
- Boerlage, G. D.: Detonation and Autoignition. Some Considerations on Methods of Determination. TM 843, Dec. 1937.
- Rothrock, A. M. and Spencer, R. C.: A
 Photographic Study of Combustion and
 Knock in a Spark-Ignition Engine.
 Rept. 622, 1938.
- Rothrock, A. M. and Biermann, Arnold E.: Engine Performance and Knock Rating of Fuels for High-Output Aircraft Engines. TN 647, April 1938.
- Biermann, Arnold E.: Effect of Spark-Timing Regularity on the Knock Limitations of Engine Performance. TN 651, May 1938.
- Rothrock, A. M. and Biermann, Arnold E.: The Knocking Characteristics of Fuels in Relation to Maximum Permissible Performance of Aircraft Engines. Rept. 655, 1939.
- Rothrock, A. M. and Spencer, R. C.: The Influence of Directed Air Flow on Combustion in a Spark-Ignition Engine. Rept. 657, 1939.
- Weinhart, H.: Knocking in the Otto-Cycle Engine. TM 911, Sept. 1939.
- Taylor, E. S.; Leary, W. A. and Diver, J. R.: Effect of Fuel-Air Ratio, Inlet Temperature, and Exhaust Pressure on Detonation. Rept. 699, 1940.
- Miller, Cearcy D.: A Study by High-Speed Photography of Combustion and Knock in a Spark-Ignition Engine. Rept. 727, 1942.
- Biermann, Arnold E.; Corrington, Lester C. and Harries, Myron L.: Effect of Additions of Aromatics on the Knocking Characteristics of Several 100-Octane Fuels at Two Engine Speeds. ARR (WR E-53), May 1942.
- Miller, Cearcy D. and Olsen, H. Lowell: Identification of Knock in NACA High-Speed Photographs of Combustion in a Spark-Ignition Engine. Rept. 761, 1943.
- Leary, W. A. and Taylor, E. S.: The Significance of the Time Concept in Engine Detonation. ARR (WR W-32), Jan. 1943.
- Sanders, Newell D. and Barnett, Henry C.: Effect of Varying Percentages of Exhaust Gas on Engine Performance. RB 3D27 (WR E-120), April 1943.

- Spark-Ignition (Cont.)
- Mühlner, E.: Researches on Preliminary Chemical Reactions in Spark-Ignition Engines. TM 1049, June 1943.
- Biermann, Arnold E. and Corrington, Lester C.: Relation of Preignition and Knock to Allowable Engine Temperatures. ARR 3G14 (WR E-134), July 1943.
- Miller, Cearcy D. and Logan, Walter O., Jr.: Preknock Vibrations in a Spark-Ignition Engine Cylinder as Revealed by High-Speed Photography. Rept. 785, 1944.
- Sanders, Newell D.; Barnett, Henry C. and Bolz, Ray E.: Effect of Inlet-Air Temperature and Cylinder Displacement on Charge Temperature of Internal-Combustion Engines. RB 4A17 (WR E-129), Jan. 1944.
- Harries, Myron L.; Nelson, R. Lee and Berguson, Howard E.: Effect of Water Injection on the Knock-Limited Performance of an Allison V-1710-99 Engine. MR (WR E-244), Sept. 1944.
- Cook, Harvey A.; Vandeman, Jack E. and Brown, Kenneth D.: Effect of Several Methods of Increasing Knock-Limited Power on Cylinder Temperatures. ARR E4I15 (WR E-36), Sept. 1944.
- Alquist, Henry E. and Male, Donald W.: Trends in Surface-Ignition Temperatures. ARR E4I25 (WR E-94), Sept. 1944.
- Brun, Rinaldo J.; Olsen, H. Lowell and Miller, Cearcy D.: End-Zone Water Injection as a Means of Suppressing Knock in a Spark-Ignition Engine. RB E4I27 (WR E-72), Sept. 1944.
- Sanders, Newell D.; Wear, Jerrold D. and Hensley, Reece V.: Relative Effects of Cylinder-Head and Inlet-Mixture Temperatures upon Knock Limits of Fuels. RB E4J13 (WR E-37), Oct. 1944.
- Tauschek, Max J. and Lietzke, A. F.:
 Effect of Fuel Volatility and Mixture
 Temperature on the Knocking Characteristics of an Allison Single-Cylinder
 Test Engine. MR E5D24 (WR E-257),
 April 1945.
- Pfender, John F.; Dudugjian, Carl and Lietzke, A. F.: Effect of Engine-Operating Variables and Internal Coolants on Spark-Advance Requirements of an Allison V-1710 Cylinder. MR E5E18 (WR E-198), May 1945.

- Harris, Herbert B.; Duffy, Robert T. and Erwin, Robert D., Jr.: Effect of Maximum Cruise-Power Operation at Ultra-Lean Mixture and Increased Spark Advance on the Mechanical Condition of Cylinder Components. MR E5I27a (WR E-268), Sept. 1945.
- Sloop, J. L.; Kinney, George R. and Rowe, William H.: Process of Lead-Deposit Accumulations on Aircraft-Engine Spark Plugs. MR E5K29 (WR E-181), Dec. 1945.
- Moeckel, W. E. and Evvard, J. C.: Determination of Gas Temperatures from the Frequency of Knock-Induced Gas Vibrations in an Internal-Combustion Engine. ARR E6A07 (WR E-132), Jan. 1946.
- Barnett, Henry C.: An Evaluation of the Knock-Limited Performance of Triptane. MR E6B20 (WR E-276), March 1946.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr.; Scadron, Marvin D. and Colnar, Anthony: The NACA Mixture Analyzer and Its Application to Mixture-Distribution Measurement in Flight. TN 1238, March 1947.
- Hirshfeld, M. A. and Miller, Cearcy D.: Instantaneous Ultraviolet Knock Spectra Correlated with High-Speed Photographs. TN 1408, Aug. 1947.
- Eppes, James V. D.; Livengood, James C. and Taylor, C. Fayette: The Effect of Changing the Ratio of Exhaust-Valve Flow Capacity to Inlet-Valve Flow Capacity on Volumetric Efficiency and Output of a Single-Cylinder Engine. TN 1365, Oct. 1947.
- Osterstrom, Gordon E.: Knocking Combustion Observed in a Spark-Ignition Engine with Simultaneous Direct and Schlieren High-Speed Motion Pictures and Pressure Records. TN 1614, June 1948.
- Lord, Albert M.; Heinicke, Orville H. and Stricker, Edward G.: Effect of Exhaust Pressure on Knock-Limited Performance of an Air-Cooled Aircraft-Engine Cylinder. TN 1617, June 1948.
- Corrington, Lester C. and Fisher, William F.: Effect of Preignition on Cylinder Temperatures, Pressures, Power Output, and Piston Failures. TN 1637, June 1948.
- McCann, W. J. (July 1943). Revised by Turner, L. R. and Bauer, Emory A.: Thermodynamic Charts for Internal-Combustion-Engine Fluids. TN 1883, July 1949.

- Compression Ignition (Diesel) (3.5.2.1.2)
- Alt, Otto: Combustion of Liquid Fuels in Diesel Engine. TM 281, Oct. 1924.
- Tausz, J. and Schulte F.: Determination of Ignition Points of Liquid Fuels Under Pressure. TM 299, Jan. 1925.
- Hesselman, K. J. E.: Hesselman Heavy-Oil High-Compression Engine. TM 312, April 1925.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part II A Discussion of the Semi-Diesel Principle and its Application to Various Types of Solid-Injection Engines. TM 357, April 1926.
- Büchner, Dr.: The Fundamental Principles of High-Speed Semi-Diesel Engines. Part III A Discussion of Fuel Mixing and Ignition, with Special Reference to Engines with Precombustion Chambers. TM 358, April 1926.
- Hausfelder, Ludwig: High-Speed Oil Engines for Vehicles I. Engines with External Atomization of the Fuel Engines with Internal Atomization of the Fuel. Hot-Bulb Engines. Diesel Engines. TM 397, Feb. 1927.
- Joachim, William F. and Kemper, Carlton: The Performance of Several Combustion Chambers Designed for Aircraft Oil Engines. Rept. 1928.
- Sass, F.: Ignition and Combustion Phenomena in Diesel Engines. TM 482, Oct. 1928.
- Tausz, J. and Schulte, F.: Ignition Points and Combustion Reactions in Diesel Engines. Part I. TM 483, Oct. 1928.
- Tausz, J. and Schulte, F.: Ignition Points and Combustion Reactions in Diesel Engines. Part II. TM 484, Oct. 1928.
- Rothrock, A. M. and Beardsley, E. G.: Some Effects of Air Flow on the Penetration and Distribution of Oil Sprays. TN 329, Dec. 1929.
- Gelalles, A. G.: Some Effects of Air and Fuel Oil Temperatures on Spray Penetration and Dispersion. TN 338, May 1930.
- Gelalles, A. G.: Effect of Orifice Length-Diameter Ratio on Spray Characteristics. TN 352, Oct. 1930.
- Neumann, Kurt: Diesel-Engine Investigations. Ignition-Chamber Engines. TM 589, Oct. 1930.

- Rothrock, A. M.: Combustion in a High-Speed Compression-Ignition Engine. Rept. 401, 1931.
- Gelalles, A. G.: Effect of Orifice Length-Diameter Ratio on Fuel Sprays for Compression-Ignition Engines. Rept. 402, 1931.
- Rothrock, A. M.: Effect of High Air Velocities on the Distribution and Penetration of a Fuel Spray. TN 376, May 1931.
- Rothrock, A. M. and Waldron, C. D.: Some Characteristics of Fuel Sprays at Low-Injection Pressures. TN 399, Nov. 1931.
- Spanogle, J. A. and Whitney, E. G.: The Effectiveness of a Double-Stem Injection Valve in Controlling Combustion in a Compression-Ignition Engine. TN 402, Dec. 1931.
- Rothrock, A. M. and Waldron, C. D.: Fuel Vaporization and Its Effect on Combustion in a High-Speed Compression-Ignition Engine. Rept. 435, 1932.
- Rothrock, A. M.: Preliminary Tests on the Vaporization of Fuel Sprays. TN 408, Feb. 1932.
- Gerrish, Harold G. and Voss, Fred: Influence of Several Factors on Ignition Lag in a Compression-Ignition Engine. TN 434, Nov. 1932.
- Moore, C. S. and Collins, J. H., Jr.: The Effect of Clearance Distribution on the Performance of a Compression-Ignition Engine with a Precombustion Chamber. TN 435, Nov. 1932.
- Moore, C. S. and Collins, J. H., Jr.: The Effect of Connecting-Passage Diameter on the Performance of a Compression-Ignition Engine with a Precombustion Chamber. TN 436, Nov. 1932.
- Spanogle, J. A. and Buckley, E. C.: The NACA Combustion Chamber Gas-Sampling Valve and Some Preliminary Test Results. TN 454, March 1933.
- Spanogle, J. A.: A Comparison of Several Methods of Measuring Ignition Lag in a Compression-Ignition Engine. TN 485, Jan. 1934.
- Buckley, E. C. and Waldron, C. D.: A Preliminary Motion-Picture Study of Combustion in a Compression-Ignition Engine. TN 496, April 1934.
- Moore, C. S. and Collins, J. H., Jr.: Effect of Combustion-Chamber Shape on the Performance of a Prechamber Compression-Ignition Engine. TN 514, Dec. 1934.

- Compression-Ignition (Diesel) (Cont.)
- Rothrock, A. M. and Waldron, C. D.: Some Effects of Injection Advance Angle, Engine-Jacket Temperature, and Speed on Combustion in a Compression-Ignition Engine. Rept. 525, 1935.
- Rothrock, A. M. and Waldron, C. D.: Effects of Air-Fuel Ratio on Fuel Spray and Flame Formation in a Compression-Ignition Engine. Rept. 545, 1935.
- Rothrock, A. M. and Waldron, C. D.: Effect of Nozzle Design on Fuel Spray and Flame Formation in a High-Speed Compression-Ignition Engine. Rept. 561, 1936.
- Holfelder, Otto: Ignition and Flame Development in the Case of Diesel Fuel Injection. TM 790, March 1936.
- Wentzel, W.: Ignition Process in Diesel Engines. TM 797, June 1936.
- Michailova, M. N. and Neumann, M. B.: The Cetene Scale and the Induction Period Preceding the Spontaneous Ignition of Diesel Fuels in Bombs. TM 813, Dec. 1936.
- Rothrock, A. M. and Waldron, C. D.: Fuel Spray and Flame Formation in a Compression-Ignition Engine Employing Air Flow. Rept. 588, 1937.
- Moore, Charles S. and Collins, John H., Jr.: Compression-Ignition Engine Performance at Altitudes and at Various Air Pressures and Temperatures. TN 619, Nov. 1937.
- Selden, Robert F.: Auto-Ignition and Combustion of Diesel Fuel in a Constant-Volume Bomb. Rept. 617, 1938.
- Petersen, Hans: Investigation of Ignition and Combustion Processes of Diesel Engines Operating with Turbulence and Air-Storage Chambers. TM 857, April 1938.
- Duchene, R.: Experimental Contribution to the Study of Combustion in Compression-Ignition Engines. TM 930, Feb. 1940.
- Tuscher, Jean E.: Direct Injection in Internal-Combustion Engines. TM 993, Nov. 1941.

TURBINE ENGINES (3.5.2.2)

Palmer, Carl B.: Performance of Compressor-Turbine Jet-Propulsion Systems. ACR L5E17 (WR L-278), June 1945.

- Pinkel, I. Irving and Shames, Harold: Analysis of Jet-Propulsion Engine Combustion-Chamber Pressure Losses. Rept. 880, 1947.
- Bolz, Ray E. and Meigs, John B.: Fuel Tests on an I-16 Jet-Propulsion Engine at Static Sea-Level Conditions. RM E7B01, April 1947.
- Childs, J. Howard; McCafferty, Richard J. and Surine, Oakley W.: Effect of Combustor-Inlet Conditions on Performance of an Annular Turbojet Combustor. TN 1357, July 1947.
- Hill, Francis U. and Mark, Herman: Performance of Experimental Turbojet-Engine Combustor. I Performance of a One-Eighth Segment of an Experimental Turbojet-Engine Combustor. RM E7J13, April 1948.
- Dittrich, Ralph T.: Effects of Fuel-Nozzle Carbon Deposition on Combustion Efficiency of Single Tubular-Type, Reverse-Flow, Combustor at Simulated Altitude Conditions. TN 1618, June 1948.
- Bogart, Donald; Okrent, David and Turner, L. Richard: Thermodynamic Charts for the Computation of Fuel Quantity Required for Constant-Pressure Combustion with Diluents. TN 1655, July 1948.
- McCann, W. J. (July 1943). Revised by Turner, L. R. and Bauer, Emory A.: Thermodynamic Charts for Internal-Combustion-Engine Fluids. TN 1883, July 1949.

RAM-JET (3.5.2.3)

- Becker, John V. and Baals, Donald D.: Analysis of Heat and Compressibility Effects in the Internal Flow Systems and High-Speed Tests of a Ram-Jet System. Rept. 773, 1943.
- Hill, Paul R.: Parameters Determining Performances of Supersonic Pilotless Airplanes Powered by Ram-Compression Power Plants. ACR L6D17, June 1946.
- Sanger, E. and Bredt, J.: A Ram-Jet Engine for Fighters. TM 1106, Oct. 1947.
- Haddock, Gordon W. and Childs, J. Howard: Preliminary Investigation of Combustion in Flowing Gas with Various Turbulence Promoters. RM E8C02, June 1948.
- McCann, W. J. (July 1943). Revised by Turner, L. R. and Bauer, Emory A.: Thermodynamic Charts for Internal-Combustion-Engine Fluids. TN 1883, July 1949.

- Rubert, Kennedy F.: An Analysis of Jet-Propulsion Systems Making Direct Use of the Working Substance of a Thermodynamic Cycle. ACR L5A30a (WR L-714), Feb. 1945.
- Shultz-Grunow, F.: Gas-Dynamic Investigations of the Pulse-Jet Tube. Parts I and II. TM 1131, Feb. 1947.
- Zipkin, Morris A. and Lewis, George W., Jr.: Analytical and Experimental Performance of an Explosion-Cycle Combustion Chamber for a Jet-Propulsion Engine. TN 1702, Sept. 1948.

ROCKETS (3.5.2.5)

- Turner, L. Richard: Consideration of Auxiliary Jet Fropulsion for Assisting Take-Off. ACR(WRE-49), May 1940.
- Byrne, Robert W.: A Method of Selecting Rocket Thrust for Experimental Supersonic Airplanes. RB L6G22, Sept. 1946.
- Busemann, Adolf: Rockets Using Liquid Oxygen. TM 1144, April 1947.
- Zborowski, Helmut: Rocket Power Plants Based on Nitric Acid and Their Specific Propulsive Weights. TM 1145, May 1947.
- Walter, Hellmuth: Report on Rocket Power Plants Based on T-Substance. TM 1170, July 1947.

Compressors

(3.6)

- Noack, W. G.: Airplane Superchargers. TN 48, May 1921.
- Heald, R. H.: Performance of a Vane-Driven Gear Pump. TN 61, Sept. 1921.
- Prayer, Georg: Increasing the Power of Internal Combustion Engines. TM 321, July 1925.
- Leglise, Pierre: Superchargers. TM 631, July 1931.
- Ritter, William K. and Johnsen, Irving A.:
 Preliminary Investigation of Deep Inducers as Separate Supercharger Components. ARR E5I28 (WR E-13), Nov. 1945.
- Douglas, John E. and Schwartz, Irving R.: Tests of Cast Aluminum-Alloy Mixed-Flow Impellers. MR E6C07 (WR E-277), April 1946.
- English, Robert E. and Hauser, Cavour H.: A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.

FLOW THEORY AND EXPERIMENT

(3.6.1)

- Anon: Standards for Discharge Measurement with Standardized Nozzles and Orifices. German Industrial Standard 1952. TM 952, Sept. 1940.
- Franz, A.: Pressure and Temperature Measurement in Supercharger Investigations. TM 953, Sept. 1940.
- Sörensen, E.: Potential Flow Through Centrifugal Pumps and Turbines. TM 973, April 1941.
- Kantrowitz, Arthur and Erwin, John R.: Cascade Investigation of Buckets for a Modern Aircraft Turbosupercharger. ACR L4J25 (WR L-765), Nov. 1944.
- Fischer, Karl: Investigation of Flow in a Centrifugal Pump. TM 1089, July 1946.
- Zinner, K.: The Combination of Internal-Combustion Engine and Gas Turbine. TM 1141, April 1947.

- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part I - Standardization of the Computations Relating to the Control of Gas-Turbine Power Plants for Aircraft by the Employment of the Laws of Similarity. TM 1142, April 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part III - Control of Jet Engines. TM 1166, May 1947.
- Brown, W. Byron: Friction Coefficients in a Vaneless Diffuser. TN 1311, May 1947.
- Barina, Frank J.: Comparative Performance of Two Vaneless Diffusers Designed with Different Rates of Passage Curvature for Mixed-Flow Impellers. TN 1490, Nov. 1947.
- Brown, W. Byron and Bradshaw, Guy R.: Design and Performance of Family of Diffusing Scrolls with Mixed-Flow Impeller and Vaneless Diffuser. TN 1568, May 1948.

AXIAL FLOW (3.6.1.1)

- Sorensen, E.: Constant-Pressure Blowers. TM 927, Jan. 1940.
- Corson, Blake W., Jr.: The Aerodynamics of a Wind-Tunnel Fan. TN 820, Aug. 1941.
- Bell, E. Barton: Test of a Single-Stage Axial-Flow Fan. Rept. 729, 1942.
- Silverstein, Abe: Tests of Propeller-Speed Cooling Blowers. ARR (WR L-455), July 1942.
- Polikovsky, V. and Nevelson, M.: The Performance of a Vaneless Diffuser Fan. TM 1038, Dec. 1942.
- Bell, E. Barton and DeKoster, Lucas J.: The Effect of Solidity, Blade Section, and Contravane Angle on the Characteristics of an Axial-Flow Fan. ARR (WR L-304), Dec. 1942.
- Silverstein, Abe: Review of NACA Investigations on Fans for Engine Cooling. ARR, Jan. 1943.

- Axial Flow Theory and Experiment (Cont.)
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA DS Cowlings on the XP-42 Airplane. II Low-Inlet-Velocity Cowling with Axial-Flow Fan and Propeller Cuffs. ARR (WR L-243), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. III Low-Inlet-Velocity Cowling Without Fan or Propeller Cuffs, with Axial-Flow Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR (WR L-508), Jan. 1943.
- Struve, E.: Theoretical Determination of Axial Fan Performance. TM 1042, April 1943.
- Sinnette, John T., Jr.; Schey, Oscar W. and King, J. Austin: Performance of NACA Eight-Stage Axial-Flow Compressor Designed on the Basis of Airfoil Theory. Rept. 758, 1944.
- Ruden, P.: Investigation of Single Stage Axial Fans. TM 1062, April 1944.
- Betz, A.: Axial Superchargers. TM 1073, Aug. 1944.
- Mutterperl, William: High-Altitude Cooling. VI - Axial-Flow Fans and Cooling Power. ARR L4I11e, Sept. 1944.
- King, J. Austin and Regan, Owen W.: Performance of NACA Eight-Stage Axial-Flow Compressor at Simulated Altitudes. ACR E4L21 (WR E-5), Dec. 1944.
- Perl, W. and Tucker, M.: A General Representation for Axial-Flow Fans and Turbines. Rept. 814, 1945.
- Bogdonoff, Seymour M. and Bogdonoff, Harriet E.: Blade Design Data for Axial-Flow Fans and Compressors. ACR L5F07a (WR L-635), July 1945.
- Zimmey, Charles M. and Lappi, Viola M.: Data for Design of Entrance Vanes from Two-Dimensional Tests of Airfoils in Cascade. ACR L5G18 (WR L-188), Oct. 1945.
- Perl, W. and Epstein, H. T.: Some Effects of Compressibility on the Flow Through Fans and Turbines. Rept. 842, 1946.
- Bullock, Robert O.; Wilcox, Ward W. and Moses, Jason J.: Experimental and Theoretical Studies of Surging in Continuous-Flow Compressors. Rept. 861, 1946.

- Kantrowitz, Arthur: The Supersonic Axial-Flow Compressor. ACR L6D02, April 1946.
- Sinnette, John T., Jr. and Voss, William J.: Extension of Useful Operating Range of Axial-Flow Compressor by Use of Adjustable Stator Blades. ACR E6E02, May 1946.
- NACA Subcommittee on Compressors: Standard Procedures for Rating and Testing Multistage Axial-Flow Compressors. TN 1138, Sept. 1946.
- Goldstein, Arthur W. and Jerison, Meyer: Isolated and Cascade Airfoils with Prescribed Velocity Distribution. Rept. 869, 1947.
- Eckert, B.: Possibilities of Reducing the Length of Axial Superchargers for Aircraft Motors. TM 1132, Jan. 1947.
- Weske, John R.: An Investigation of the Aerodynamic Characteristics of a Rotating Axial-Flow Blade Grid. TN 1128, Feb. 1947.
- Runckel, Jack F. and Davey, Richard S.:
 Pressure-Distribution Measurements
 on the Rotating Blades of a SingleStage Axial-Flow Compressor. TN
 1189, Feb. 1947.
- Bogdonoff, Seymour M. and Herrig, L. Joseph: Performance of Axial-Flow Fan and Compressor Blades Designed for High Loadings. TN 1201, Feb. 1947.
- Encke, W.: Investigations on Experimental Impellers for Axial Blowers. TM 1123, April 1947.
- Eckert, B.: Recent Results on High-Pressure Axial Blowers. TM 1128, April 1947.
- Bogdonoff, Seymour M. and Hess, Eugene E.: Axial-Flow Fan and Compressor Blade Design Data at 52.5° Stagger and Further Verification of Cascade Data by Rotor Tests. TN 1271, April 1947.
- Kahane, A.: Investigation of Axial-Flow Fan and Compressor Rotors Designed for Three-Dimensional Flow. RM L7D02a, May 1947.
- Shimoyama, Yoshinori: Tests of Cascades of Airfoils for Retarded Flow. TM 1190, Oct. 1947.
- Eckert, B.; Pflüger, F. and Weinig, F.:
 The Influence of the Diameter Ratio on
 the Characteristics Diagram of the
 Axial Compressor. TM 1125, April
 1948.

- Axial Flow Theory and Experiment (Cont.)
- Moses, Jason J. and Kazberovich, Thomas I.: Effect of Size and Number of Outlet Pipes on Design of Collectors for Rating and Testing Axial-Flow Compressors. TN 1607, June 1948.
- Kahane, A.: Investigation of Axial-Flow Fan and Compressor Rotors Designed for Three-Dimensional Flow. TN 1652, July 1948.
- Weinig, F. and Eckert, B.: Measurements on Compressor Blade Lattices. TM 1193, Aug. 1948.
- Dietz, Robert O., Jr. and Suozzi, Frank L.:
 Altitude-Wind-Tunnel Investigation of
 a 4000-Pound-Thrust Axial-Flow
 Turbojet Engine. IV Analysis of
 Compressor Performance. RM
 E8F09c, Aug. 1948.
- Mankuta, Harry and Guentert, Donald C.:
 Investigation of Performance of Single-Stage Axial-Flow Compressor Using NACA 5509-34 Blade Section. RM E8F30, Sept. 1948.
- Wu, Chung-Hua and Wolfenstein, Lincoln: Application of Radial-Equilibrium Condition to Axial-Flow Compressor and Turbine Design. TN 1795, Jan. 1949.
- Burtt, Jack R.: Investigation of Performance of Typical Inlet Stage of Multi-Stage Axial-Flow Compressor. RM E9E13, July 1949.

RADIAL FLOW (3.6.1.2)

- Weick, Fred E.: A Comparison of Propeller and Centrifugal Fans for Circulating the Air in a Wind Tunnel. TN 281, March 1928.
- Schey, Oscar W.: The Comparative Performance of Superchargers. Rept. 384, 1931.
- Oestrich, Hermann: Investigation of a Rateau Supercharger for a 700-Horsepower Airplane Engine. TM 738, March 1934.
- Von der Nüll, Werner: The Design of Airplane-Engine Superchargers. TM 839, Oct. 1937.
- Betz, A. and Flügge-Lotz, I.: Design of Centrifugal Impeller Blades. TM 902, July 1939.
- Ku, P. M. and Wang, C. H.: A Study of the Centrifugal Supercharger. ACR, June 1940.

- Von der Nüll, W.: The Maximum Delivery Pressure of Single-Stage Radial Superchargers for Aircraft Engines. TM 949, Aug. 1940.
- Kollmann, K.: Limits of Single-Stage Compression in Centrifugal Superchargers for Aircraft. TM 954, Sept. 1940.
- Sorensen, E.: Potential Flow Through Centrifugal Pumps and Turbines. TM 973, April 1941.
- Polikovsky, V. and Nevelson, M.: The Performance of a Vaneless Diffuser Fan. TM 1038, Dec. 1942.
- Dovjik, S. and Polikovsky, W.: Experimental Investigation of a Model of a Two-Stage Turboblower. TM 1043, April 1943.
- Benser, William A. and Moses, Jason J.: An Investigation of the Backflow Phenomenon in Centrifugal Superchargers. Rept. 806, 1945.
- Marble, Frank E.; Ritter, William K. and Miller, Mahlon A.: Effect of the NACA Injection Impeller on the Mixture Distribution of a Double-Row Radial Aircraft Engine. Rept. 821, 1945.
- King, J. Austin and Klein, Harold: Performance Characteristics of a Junkers Jumo 211F Engine Supercharger with a DVL Fully Shrouded Impeller and Scroll Diffuser. ARR E5B03 (WR E-3), Feb. 1945.
- Ris, V. F.: On the Automatic Regulation of Output in Centrifugal Compressors. TM 1081, July 1945.
- Baas, Edmund J.; Monroe, William R. and Mesrobian, John M.: Air-Flow and Performance Characteristics of the Engine-Stage Supercharger of the Wright R-3350-21 Engine. Part I -Effect of Operating Variables. MR E5H28 (WR E-266), Aug. 1945.
- NACA Subcommittee on Supercharger Compressors: Standard Procedures for Rating and Testing Centrifugal Compressors. ARR E5F13 (WR E-6), Aug. 1945.
- Brown, W. Byron: Computation of the Mean Tangential Velocity of the Air Leaving the Blade Tips of a Centrifugal Supercharger. RB E5G21 (WR E-11), Aug. 1945.
- NACA Subcommittee on Supercharger Compressors: Standard Method of Graphical Presentation of Centrifugal Compressor Performance. ARR E5F13a (WR E-4), Aug. 1945.

- Radial Flow Theory and Experiment (Cont.)
- Ritter, William K. and Johnsen, Irving A.: Performance Effect of Fully Shrouding a Centrifugal Supercharger Impeller. ARR E5H23 (WR E-2), Oct. 1945.
- Bullock, Robert O.; Wilcox, Ward W. and Moses, Jason J.: Experimental and Theoretical Studies of Surging in Continuous-Flow Compressors. Rept. 861, 1946.
- Ritter, William K.; Johnsen, Irving A. and Lieblein, Seymour: Hydraulic Characteristics of the NACA Injection Impeller. MR E6C25 (WR E-278), May 1946.
- Ritter, William K.; Ginsburg, Ambrose and Redlitz, Alfred G.: Effects of Axial-Plane Curvature and Passage-Area Variations on Flow Capacity of Radial-Discharge Impeller with Conventional Inlet Buckets. TN 1968, May 1946.
- Baas, Edmund J. and Dugan, Paul D.: Air-Flow and Performance Characteristics of Engine-Stage Supercharger of R-3350-21 Engine. II - Effect of Design Variables. MR E6G25 (WR E-285), Aug. 1946.
- Kohl, Robert C. and Diggs, Donald R.: Effect of Various Methods of Boundary-Layer Control on Performance of V-1710-93 Engine-Stage Supercharger. RM E6L19, Jan. 1947.
- Standahar, Ray M. and McCarty, James S.:
 Effect of Modifications to Induction
 System on Altitude Performance of
 V-1710-93 Engine. III Use of Parabolic Rotating Guide Vanes and NACADesigned Auxiliary-Stage Inlet Elbow
 and Interstage Duct. RM E6L27, Jan.
 1947.
- Johnsen, I. A.; Ritter, W. K. and Anderson, R. J.: Performance of a Radial-Inlet Impeller Designed on the Basis of Two-Dimensional Flow Theory for an Infinite Number of Blades. TN 1214, March 1947.
- Denkmeier, H. and Gross, K.: Description of Russian Aircraft Engines "AM 35" and "AM 38." TM 1169, April 1947.
- Jones, William L. and Dowman, Harry W.: Investigation of Thrust Augmentation of a 1600-Pound Thrust Centrifugal-Flow Type Turbojet Engine by Injection of Refrigerants at Compressor Inlets. RM E7G23, Aug. 1947.

- Anderson, Robert J.; Ritter, William K. and Parsons, Shirley R.: Apparent Effect of Inlet Temperature on Adiabatic Efficiency of Centrifugal Compressors. TN 1537, Feb. 1948.
- Stanitz, John D.: Two-Dimensional, Compressible Flow in Conical, Mixed-Flow Compressors. TN 1744, Nov. 1948.
- Ginsburg, Ambrose; Johnsen, Irving A. and Redlitz, Alfred C.: Determination of Centrifugal-Compressor Performance on Basis of Static-Pressure Measurements in Vaneless Diffuser. TN 1880, June 1949.
- Stanitz, John D. and Ellis, Gaylord O.:
 Two-Dimensional Compressible Flow
 in Centrifugal Compressors with
 Straight Blades. TN 1932, Aug. 1949.

MIXED FLOW (3.6.1.3)

- Sorensen, E.: Potential Flow Through Centrifugal Pumps and Turbines. TM 973, April 1941.
- King, J. Austin and Glodeck, Edward: Characteristics of Turbo Engineering Corporation Supercharger, Impeller No. TR-2077K, Diffuser No. TE-73221B. MR (WR E-197), July 1942.
- King, J. Austin and Schey, Oscar W.:

 Performance of Two-Stage Turbosupercharger Using Mixed-Flow Impellers. MR (WR E-203), Oct. 1942.
- Benser, William A. and Moses, Jason J.: An Investigation of the Backflow Phenomenon in Centrifugal Superchargers. Rept. 806, 1945.
- NACA Subcommittee on Supercharger Compressors: Standard Method of Graphical Presentation of Compressor Performance. ARR E5F13a (WR E-4), Aug. 1945.
- Brown, W. Byron: Computation of the Mean Tangential Velocity of the Air Leaving the Blade Tips of a Centrifugal Supercharger. RB E5G21 (WR E-11), Aug. 1945.
- Ritter, William K.; Ginsburg, Ambrose and Beede, William L.: Performance Comparison of Two Deep Inducers as Separate Components and in Combination with an Impeller. ARR E4J03 (WR E-9), Oct. 1945.
- Bullock, Robert O.; Wilcox, Ward W. and Moses, Jason J.: Experimental and Theoretical Studies of Surging in Continuous-Flow Compressors. Rept. 861, 1946.

- Mixed Flow Theory and Experiment (Cont.)
- Douglas, John E. and Schwartz, Irving R.: Tests of Cast Aluminum-Alloy Mixed-Flow Impellers. MR E6C07 (WR E-277, April 1946.
- Ginsburg, Ambrose; Ritter, William K. and Palasics, John: Effects on Performance of Changing the Division of Work Between Increase of Angular Velocity and Increase of Radius of Rotation in an Impeller. TN 1216, Feb. 1947.
- Anderson, Robert J.; Ritter, William K. and Dildine, Dean M.: An Investigation of the Effect of Blade Curvature on Centrifugal-Impeller Performance. TN 1313, May 1947.
- Brown, W. Byron and Bradshaw, Guy R.: Method of Designing Vaneless Diffusers and Experimental Investigation of Certain Undetermined Parameters. TN 1426, Sept. 1947.
- Barina, Frank J.: Comparative Performance of Two Vaneless Diffusers Designed with Different Rates of Passage Curvature for Mixed-Flow Impellers. TN 1490, Nov. 1947.
- Anderson, Robert J.; Ritter, William K. and Parsons, Shirley R.: Apparent Effect of Inlet Temperature on Adiabatic Efficiency of Centrifugal Compressors. TN 1537, Feb. 1948.
- Brown, W. Byron and Bradshaw, Guy R.:
 Design and Performance of Family of
 Diffusing Scrolls with Mixed-Flow
 Impeller and Vaneless Diffuser.
 TN 1568, May 1948.
- Stanitz, John D.: Two-Dimensional, Compressible Flow in Conical, Mixed-Flow Compressors. TN 1744, Nov. 1948.
- Ginsburg, Ambrose; Johnsen, Irving A. and Redlitz, Alfred C.: Determination of Centrifugal-Compressor Performance on Basis of Static-Pressure Measurements in Vaneless Diffuser. TN 1880, June 1949.
- Stanitz, John D. and Ellis, Gaylord O.: Two-Dimensional Compressible Flow in Centrifugal Compressors with Straight Blades. TN 1932, Aug. 1949.

POSITIVE DISPLACEMENT (3.6.1.4)

Ware, Marsden: Description and Laboratory Tests of a Roots Type Aircraft Engine Supercharger. Rept. 230, 1927.

- Gardiner, Arthur W. and Reid, Elliott G.:
 Preliminary Flight Tests of the NACA
 Roots Type Aircraft Engine Supercharger. Rept. 263, 1927.
- Ware, Marsden and Wilson, Ernest E.:
 The Comparative Performance of Roots
 Type Aircraft Engine Superchargers as
 Affected by Change in Impeller Speed
 and Displacement. Rept. 284, 1928.
- Schey, Oscar W. and Wilson, Ernest E.:
 An Investigation of the Use of Discharge Valves and an Intake Control for Improving the Performance of NACA Roots Type Supercharger.
 Rept. 303, 1928.
- Schey, Oscar W. and Young, Alfred W.: Comparative Flight Performance with an NACA Roots Supercharger and a Turbocentrifugal Supercharger. Rept. 355, 1930.
- Schey, Oscar W.: The Comparative Performance of Superchargers. Rept. 384, 1931.
- Schey, Oscar W. and Ellerbrock, Herman H., Jr.: Comparative Performance of a Powerplus Vane-Type Supercharger and an NACA Roots-Type Supercharger. TN 426, July 1932.
- Schey, Oscar W. and Ellerbrock, Herman H., Jr.: The Performance of a DePalma Roots-Type Supercharger. TN 558, March 1936.

STRESS AND VIBRATION

(3.6.2)

- Kutzbach, J.: Experience with Geared Propeller Drives for Aviation Engines. TN 16, Sept. 1920.
- Matteucci, Raffaelli: Functioning of Reduction Gears on Airplane Engines. TM 352, March 1926.
- Ricardo, H. R.: Some Notes on Gasoline-Engine Development. TM 420, July 1927.
- Tumarkin, S.: Methods of Stress Calculation in Rotating Disks. TM 1064, Sept. 1944.
- NACA Subcommittee on Supercharger Compressors: Standard Method of Graphical Presentation of Compressor Performance. ARR E5F13a (WR E-4), Aug. 1945.
- Douglas, John E. and Schwartz, Irving R.: Tests of Cast Aluminum-Alloy Mixed-Flow Impellers. MR E6C07 (WR E-277), April 1946.

Stress and Vibration (Cont.)

- Simpkinson, Scott H.; Eatherton, Laurel J. and Millenson, Morton B.: Effect of Centrifugal Force on the Elastic Curve of a Vibrating Cantilever Beam. TN 1204, Feb. 1947.
- Millenson, M. B. and Wilterdink, P. I. Empirical Mode Constants for Calculating Frequencies of Axial-Flow Compressor Blades. RM E8A20, April 1948.
- Millenson, M. B. and Manson, S. S.: Determination of Stresses in Gas-Turbine Disks Subjected to Plastic Flow and Creep. TN 1636, June 1948.
- Holms, Arthur G. and Jenkins, Joseph E.: Effect of Strength and Ductility on Burst Characteristics of Rotating Disks. TN 1667, July 1948.
- Good, James N.: Residual Stress Analysis of Overspeeded Disk with Central Hole by X-Ray Diffraction. RM E8E11, July 1948.
- Weigand, A.: The Problem of Torsion in Prismatic Members of Circular Segmental Cross Section. TM 1182, Sept. 1948.
- Mendelson, Alexander: Effect of Centrifugal Force on Flutter of Uniform Cantilever Beam at Subsonic Speeds with Application to Compressor and Turbine Blades. TN 1893, June 1949.

MATCHING

(3.6.3)

Bullock, Robert O.; Keetch, Robert C. and Moses, Jason J.: A Method of Matching the Performance of Compressor Systems with That of Aircraft Power Sections. Rept. 815, 1945.

- NACA Subcommittee on Supercharger Compressors: Standard Procedures for Rating and Testing Centrifugal Compressors. ARR E5F13 (WR E-6), Aug. 1945.
- NACA Subcommittee on Supercharger Compressors: Standard Method of Graphical Presentation of Centrifugal Compressor Performance. ARR E5F13a (WR E-4), Aug. 1945.
- Ritter, William K.; Ginsburg, Ambrose and Beede, William L.: Performance Comparison of Two Deep Inducers as Separate Components and in Combination with an Impeller. ARR E5J03 (WR E-9), Oct. 1945.
- Ritter, William K. and Johnsen, Irving A.: Preliminary Investigation of Deep Inducers as Separate Supercharger Components. ARR E5I28 (WR E-13), Nov. 1945.
- Sinnette, John T., Jr. and Voss, William J.:
 Extension of Useful Operating Range
 of Axial-Flow Compressor by Use of
 Adjustable Stator Blades. ACR
 E6E02, May 1946.
- Goldstein, Arthur W.; Alpert, Sumner; Beede, William and Kovach, Karl: Analysis of the Performance of a Jet Engine from Characteristics of the Components. II - Interaction of the Components as Determined from Engine Operation. TN 1701, Sept. 1948.
- Ginsburg, Ambrose; Johnsen, Irving A. and Redlitz, Alfred C.: Determination of Centrifugal-Compressor Performance on Basis of Static-Pressure Measurements in Vaneless Diffuser. TN 1880, June 1949.

Turbines

(3.7)

- English, Robert E. and Hauser, Cavour H.: A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.
- Hoffman, Charles A. and Ault, G. Mervin: Application of Statistical Methods to the Study of Gas-Turbine Blade Failures. TN 1603, June 1948.
- NACA Subcommittee on Turbines: Provisional Symbols and Definitions for Aircraft Turbines. TN 1508, March 1949.
- Hoffman, Charles A.; Ault, G. Mervin and Gangler, James J.: Initial Investigation of Carbide-Type Ceramal of 80-Percent Titanium Carbide Plus 20-Percent Cobalt for Use as Gas-Turbine-Blade Material. TN 1836, March 1949.

FLOW THEORY AND EXPERIMENT

(3.7.1)

- Anon.: Standard for Discharge Measurement with Standardized Nozzles and Orifices. German Industrial Standard 1952. TM 952, Sept. 1940.
- Pinkel, Benjamin and Turner, L. Richard: Thermodynamic Data for the Computation of the Performance of Exhaust-Gas Turbines. ARR 4B25 (WR E-23), Feb. 1944.
- Kantrowitz, Arthur and Huber, Paul W.: Heat-Capacity Lag in Turbine-Working Fluids. ARR L4E29 (WR L-21), May 1944.
- Weske, John R.: An Investigation of the Aerodynamic Characteristics of a Rotating Axial-Flow Blade Grid. TN 1128, Feb. 1947.
- Lord, Albert M. and Donnola, Joseph: Investigation of Pressure Losses in Several Turbosupercharger Nozzle Boxes. RM E7B11, Feb. 1947.
- Zinner, K.: The Combination of Internal-Combustion Engine and Gas Turbine. TM 1141, April 1947.

- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part I Standardization of the Computations Relating to the Control of Gas-Turbine Power Plants for Aircraft by the Employment of the Laws of Similarity. TM 1142, April 1947.
- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part III - Control of Jet Engines. TM 1166, May 1947.
- Goldstein, Arthur W. and Jerison, Meyer: Isolated and Cascade Airfoils with Prescribed Velocity Distribution. TN 1308, May 1947.
- Von Vietinghoff-Scheel, K.: Laboratory Report of the Investigation of the Flow Around Two Turbine-Blade Profiles Using the Interferometer Method. TM 1171, July 1947.
- Goldstein, Arthur W.: Analysis of the Performance of a Jet Engine from Characteristics of the Components. I Aerodynamic and Matching Characteristics of the Turbine Component Determined with Cold Air. TN 1459, Oct. 1947.
- Huppert, M. C. and MacGregor, Charles: Comparison Between Predicted and Observed Performance of Gas-Turbine Stator Blade Designed for Free-Vortex Flow. TN 1810, April 1949.

AXIAL FLOW (3.7.1.1)

- Struve, E.: Theoretical Determination of Axial Fan Performance. TM 1042, April 1943.
- Turner, L. Richard and Desmon, Leland G.: Performance of Blowdown Turbine Driven by Nine-Cylinder Radial Engine. Rept. 786, 1944.
- Ruden, P.: Investigation of Single Stage Axial Fans. TM 1062, April 1944.
- Perl, W. and Tucker, M.: A General Representation for Axial-Flow Fans and Turbines. Rept. 814, 1945.
- Gabriel, David S. and Carman, L. Robert: Efficiency Tests of a General Electric Type B-2 Turbine with Air as the Driving Fluid. ACR E5C30, April 1945.

- Axial Flow Theory and Experiment (Cont.)
- Gabriel, David S.; Carman, L. Robert and Trautwein, E.: The Effect of Inlet Pressure and Temperature on the Efficiency of a General Electric Type B-2 Exhaust-Gas Turbine. ACR E5E19 (WR E-218), June 1945.
- Gabriel, David S. and Carman, L. Robert: The Performance of a Single-Stage Impulse Turbine with a 11.0-Inch Pitch-Diameter Wheel Using Cast Airfoil-Shaped and Bent Sheet-Metal Nozzle Blades. ARR E5H31 (WR E-233), Aug. 1945.
- Chanes, Ernest R. and Carman, L. Robert: The Effect of Inlet Temperature and Pressure on the Efficiency of a Single-Stage Impulse Turbine with a 13.2-Inch Wheel Pitch-Line Diameter. ARR E5H10 (WR E-232), Sept. 1945.
- Zimmey, Charles M. and Lappi, Viola M.: Data for Design of Entrance Vanes from Two-Dimensional Tests of Airfoils in Cascade. ACR L5G18 (WR L-188), Oct. 1945.
- Trautwein, Elmer E. and Gabriel, David S.: The Effect of Two Inlet-Duct Designs on Turbine Efficiency. CB E5K21 (WR E-209), Dec. 1945.
- Perl, W. and Epstein, H. T.: Some Effects of Compressibility on the Flow Through Fans and Turbines. Rept. 842, 1946.
- Turner, L. Richard; Lowdermilk, Warren H. and Lord, Albert M.: Performance of Hoods for Aircraft Exhaust-Gas Turbines. TN 1149, Nov. 1946.
- Eckert and Korbacher: The Flow Through Axial Turbine Stages of Large Radial Blade Length. TM 1118, April 1947.
- Spurr, Robert A. and Allen, H. Julian: A Theory of Unstaggered Airfoil Cascades in Compressible Flow. RM A7E29, July 1947.
- Hartwig, Frederick J.; Sheflin, Bob W. and Jones, Robert J.: Preliminary Investi-gation of a Gas Turbine with Sillimanite Ceramic Rotor Blades. TN 1399, July 1947.
- Hasenblas: Pressure Distribution Measurements on a Turbine Rotor Blade Passing Behind a Turbine Nozzle Lattice. TM 1173, Sept. 1947.
- Goldstein, Arthur W.: Analysis of the Performance of a Jet Engine from Characteristics of the Components. I - Aerodynamic and Matching Characteristics of the Turbine Component Determined with Cold Air. TN 1459, Oct. 1947.

- Freche, John C. and Sheflin, Bob W.: Investigation of a Gas Turbine with National Bureau of Standards Body 4811 Ceramic Rotor Blades. RM E8G20, Oct. 1948.
- Desmon, Leland G. and Sams, Eldon W .: Performance of Exhaust-Gas Blowdown Turbine and Various Engine Systems Using a 12-Cylinder Liquid-Cooled Engine. TN 1735, Nov. 1948.
- Kochendorfer, Fred D. and Nettles, J Cary: An Analytical Method of Estimating Turbine Performance. RM E8I16, Dec. 1948.
- Wu, Chung-Hua and Wolfenstein, Lincoln: Application of Radial-Equilibrium Condition to Axial-Flow Compressor and Turbine Design. TN 1795, Jan. 1949.

RADIAL FLOW (3.7.1.2)

- Stanitz, John D.: Two-Dimensional, Compressible Flow in Conical, Mixed-Flow Compressors. TN 1744, Nov. 1948.
- Stanitz, John D. and Ellis, Gaylord O .: Two-Dimensional Compressible Flow in Centrifugal Compressors with Straight Blades. TN 1932, Aug. 1949.

MIXED FLOW (3.7.1.3)

- Coulter, Earl E.; Larkin, Robert G. and Gabriel, David S.: Efficiency of the Turbo Éngineering Corporation Model XTT13-12 Exhaust-Gas Turbine. MR E6F03 (WR E-281), July 1946.
- Stanitz, John D.: Two-Dimensional, Compressible Flow in Conical, Mixed-Flow Compressors. TN 1744, Nov. 1948.
- Stanitz, John D. and Ellis, Gaylord O.: Two-Dimensional Compressible Flow in Centrifugal Compressors with Straight Blades. TN 1932, Aug. 1949.

COOLING

(3.7.2)

- Hartwig, Frederick J., Jr.: Comparative Effectiveness of a Convection-Type and a Radiation-Type Cooling Cap on a Turbosupercharger. TN 1082, June 1946.
- Bartoo, Edward R.: Turbosupercharger-Rotor Temperatures in Flight. TN 1159, Oct. 1946.

Cooling (Cont.)

- Brown, W. Byron and Livingood, John N. B.: Cooling of Gas Turbines. III -Analysis of Rotor and Blade Temperatures in Liquid-Cooled Gas Turbines. RM E7B11c, Feb. 1947.
- Sanders, J. C. and Mendelson, Alexander: Theoretical Evaluation of Methods of Cooling the Blades of Gas Turbines. RM E7B11g, Feb. 1947.
- Brown, W. Byron and Monroe, William R.:
 Cooling of Gas Turbines. IV Calculated Temperature Distribution in the
 Trailing Part of a Turbine Blade Using
 Direct Liquid Cooling. RM E7B11d,
 April 1947.
- Wolfenstein, Lincoln; Maxwell, Robert J. and McCarthy, John S.: Cooling of Gas Turbines. V - Effectiveness of Air Cooling of Hollow Blades. RM E7B11e, April 1947.
- Livingood, John N. B. and Sams, Eldon W.:
 Cooling of Gas Turbines. VI Computed Temperature Distribution
 Through Cross Section of WaterCooled Turbine Blade. RM E7B11f,
 May 1947.
- Pollman, Erich: Temperatures and Stresses on Hollow Blades for Gas Turbines. TM 1183, June 1947.

STRESS AND VIBRATION

(3.7.3)

- Tumarkin, S.: Methods of Stress Calculation in Rotating Disks. TM 1064, Sept. 1944.
- Holms, Arthur G. and Faldetta, Richard D.: Effects of Temperature Distribution and Elastic Properties of Materials on Gas-Turbine Disk Stresses. Rept. 864, 1947.
- Manson, S. S.: The Determination of Elastic Stresses in Gas-Turbine Disks. Rept. 871, 1947.
- Millenson, M. B. and Manson, S. S.: Investigation of Rim Cracking in Turbine Wheels with Welded Blades. RM E6L17, Feb. 1947.
- Simpkinson, Scott H.; Eatherton, Laurel J. and Millenson, Morton B.: Effect of Centrifugal Force on the Elastic Curve of a Vibrating Cantilever Beam. TN 1204, Feb. 1947.

- Kemp, R. H.; Morgan, W. C. and Manson, S. S.: The Application of High-Temperature Strain Gages to the Measurement of Vibratory Stresses in Gas-Turbine Buckets. TN 1174, April 1947.
- Pollman, Erich: Temperatures and Stresses on Hollow Blades for Gas Turbines. TM 1183, June 1947.
- Millenson, M. B. and Manson, S. S.: Determination of Stresses in Gas-Turbine Disks Subjected to Plastic Flow and Creep. TN 1636, June 1948.
- Good, James N.: Residual Stress Analysis of Overspeeded Disk with Central Hole by X-Ray Diffraction. RM E8E11, July 1948.
- Holms, Arthur G. and Jenkins, Joseph E.: Effect of Strength and Ductility on Burst Characteristics of Rotating Disks. TN 1667, July 1948.
- László, F.: Rotating Disks in the Region of Permanent Deformation. TM 1192, Aug. 1948.
- Weigand, A.: The Problem of Torsion in Prismatic Members of Circular Segmental Cross Section. TM 1182, Sept. 1948.
- LaValle, Vincent L. and Huppert, Merle C.: Effects of Several Design Variables on Turbine-Wheel Weight. TN 1814, Feb. 1949.

MATCHING

(3.7.4)

- Goldstein, Arthur W.: Analysis of the Performance of a Jet Engine from Characteristics of the Components. I Aerodynamic and Matching Characteristics of the Turbine Component Determined with Cold Air. TN 1459, Oct. 1947.
- Goldstein, Arthur W.; Alpert, Sumner; Beede, William and Kovach, Karl: Analysis of the Performance of a Jet Engine from Characteristics of the Components. II Interaction of the Components as Determined from Engine Operation. TN 1701, Sept. 1948.
- Kochendorfer, Fred D. and Nettles, J. Cary: An Analytical Method of Estimating Turbine Performance. RM E8I16, Dec. 1948.

Friction And Lubrication

(3.8)

- Moore, Charles S. and Collins, John H., Jr.: Friction of Compression-Ignition Engines. TN 577, Aug. 1936.
- Spurr, Robert A. and Olson, Walter T.:
 The Effect of Tylidines on the Load-Carrying Capacity of an Aircraft-Engine Oil I. MR (WR E-157),
 Aug. 1943.
- Olson, Walter T. and Meyrowitz, Emanuel: The Effect of Xylidines on the Stability of an Aircraft-Engine Lubricating Oil. MR (WR E-158), Aug. 1943.
- Olson, Walter T. and Spurr, Robert A.: The Effect of Xylidines on the Load-Carrying Capacity of an Aircraft-Engine Oil - II. MR (WR E-160), Sept. 1943.

THEORY AND EXPERIMENT (3.8.1)

- McDewell, H. S.: Test of Oil Scraper Piston Ring and Piston Fitted with Oil Drain Holes. TN 88, Aug. 1922.
- Sparrow, S. W. and Thorne, M. A.: Friction of Aviation Engines. Rept. 262, 1927.
- Sakmann, B. W.; Grossman, N. and Irvine, John W., Jr.: A Study of Metal Transfer Between Sliding Surfaces. TN 1355, 1947.
- Ferretti, Pericle: Experiments with Needle Bearings. TM 707, May 1933.
- Getzlaff, Günter: Experiments on Ball and Roller Bearings Under Conditions of High Speed and Small Oil Supply. TM 945, July 1940.
- Spurr, Robert A. and Olson, Walter T.: The Effect of Xylidines on the Load-Carrying Capacity of an Aircraft-Engine Oil - I. MR (WR E-157), Aug. 1943.
- Olson, Walter T. and Meyrowitz, Emanuel: The Effect of Xylidines on the Stability of an Aircraft-Engine Lubricating Oil. MR (WR E-158), Aug. 1943.
- Olson, Walter T. and Spurr, Robert A.: The Effect of Xylidines on the Load-Carrying Capacity of an Aircraft-Engine Oil - II. MR (WR E-160), Sept. 1943.

- Tischler, Adelbert O.: Determination of Iron Contamination of Used Lubricating Oil for Use in Measuring Rates of Wear in Aircraft Engines. RB 4C25 (WR E-123), March 1944.
- Good, J. N. and Godfrey, Douglas: Changes Found on Run-In and Scuffed Surfaces of Steel, Chrome Plate, and Cast Iron. TN 1432, Oct. 1947.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.
- McBain, J. W. and Robinson, James V.: Surface Properties of Oils. TN 1844, March 1949.
- Macks, E. Fred: Preliminary Investigation of Needle Bearings of 1-1/8-Inch Pitch Diameter at Speeds to 17,000 rpm. TN 1920, Aug. 1949.

HYDRODYNAMIC THEORY (3.8.1.1)

- Hersey, Mayo D.: Viscosity of Diesel Engine Fuel Oil Under Pressure. TN 315, Sept. 1929.
- Jaquerod, A.; Defossez, L. and Mügeli, H.: Experimental Research on the Friction of Pivots. TM 566, May 1930.
- Bobrowsky, A. R. and Machlin, E. S.: Artificial Running-In of Piston Rings. ARR 4C21 (WR E-126), March 1944.
- Boegli, Charles P.: The Hydrodynamic Lubrication of Near-Infinite Sliders Such as Piston Rings. ARR E4I22 (WR E-70), Oct. 1944.
- Tischbein, Hans W.: The Friction of Piston Rings. TM 1069, March 1945.
- Johnson, Robert L. and Swikert, Max: Single-Cylinder Oil-Control Tests of Porous Chrome-Plated Cylinder Barrels for Radial Air-Cooled Engines. ARR E5L18 (WR E-25), Jan. 1946.
- Shaw, M. C. and Nussdorfer, T. J., Jr.:
 An Analysis of the Full-Floating
 Journal Bearing. Rept. 866, 1947.

- Hydrodynamic Theory (Cont.)
- Manson, S. S. and Morgan, W. C.: Distribution of Bearing Reactions on a Rotating Shaft Supported on Multiple Journal Bearings. TN 1280, May 1947.
- Orloff, P. I.: Coefficient of Friction, Oil Flow and Heat Balance of a Full-Journal Bearing. TM 1165, Oct. 1947.
- Ladanyi, Dezso J.: Effects of Temporal Tangential Bearing Acceleration on Performance Characteristics of Slider and Journal Bearings. TN 1730, Oct. 1948.
- Strang, Charles D. and Clark, Thomas P.: Effect of High Shear Rate on Erosion of Common Bearing Metals. TN 1887, June 1949.

CHEMISTRY OF LUBRICATION (3.8.1.2)

- Heidebroek, E. and Pietsch, E.: Investigation of Lubricants Under Boundary Friction. TM 1014, May 1942.
- Meyrowitz, Emanuel and Olson, Walter T.: The Effect of Xylidines on the Corrosiveness of Aircraft-Engine Oil. MR (WR E-156), July 1943.
- Bobrowsky, A. R.; Kittel, J. Howard and Boegli, Charles P.: Experimental Study of the Coating Formed on Nitrided-Steel Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4C31 (WR E-143), March 1944.
- McBain, J. W.; Ross, S.; Brady, A. P.; Robinson, J. V.; Abrams, I. M.; Thorburn, R. C. and Lindquist, C. G.: Foaming of Aircraft-Engine Oils as a Problem in Colloid Chemistry - I. ARR 4105 (WR W-52), Sept. 1944.
- Kittel, J. Howard and Vierthaler, Walter A.: Experimental Study of the Coating Found on Scuffed Cast-Iron Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4K02 (WR E-29), Nov. 1944.
- Nowick, A. S. and Brockway, L. O.: An Electron-Diffraction Examination of Cast-Iron Piston Rings from Single-Cylinder Aircraft-Engine Tests. ACR E4J25 (WR E-144), Feb. 1945.
- Tischbein, Hans W.: The Friction of Piston Rings. TM 1069, March 1945.

- Good, J. N. and Brockway, L. O.: An Electron and X-Ray Diffraction Investigation of Surface Changes on Nitrided-Steel Piston Rings During Engine Operation in Nitrided-Steel Cylinder Barrels. ACR E4L27, March 1945.
- Gwathmey, A. T.; Leidheiser, H. and Smith, G. P.: The Chemical Action of Oils on Single Crystals of Metals. TN 982, Nov. 1945.
- Nowick, A. S. and Brockway, L. O.: Occurrence of Iron Oxides on Cast-Iron Engine Surfaces After Operation. ACR E5L18 (WR E-76), Feb. 1946.
- Powell, Allen S.: Reactions with Steel of Compounds Containing Chemical Groups Used in Lubricant Additives. TN 1207, Feb. 1947.
- Johnson, Robert L.; Godfrey, Douglas and Bisson, Edmond E.: Friction of Solid Films on Steel at High Sliding Velocities. TN 1578, April 1948.
- Gwathmey, Allan T.; Leidheiser, Henry, Jr. and Smith, G. Pedro: Influence of Crystal Plane and Surrounding Atmosphere on Chemical Activities of Single Crystals of Metals. TN 1460, June 1948.
- Gwathmey, Allan T.; Leidheiser, Henry, Jr. and Smith, G. Pedro: Influence of Crystal Plane and Surrounding Atmosphere on Some Types of Friction and Wear Between Metals. TN 1461, June 1948.
- Sakmann, B. W. and Rightmire, B. G.: An Investigation of Fretting Corrosion Under Several Conditions of Oxidation. TN 1492, June 1948.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities of Surfaces Lubricated with Sulfur as an Additive. TN 1720, Oct. 1948.
- McBain, J. W.; Ross, Sydney and Brady, A. P.; Analysis of Properties of Foam. TN 1840, March 1949.
- Woods, W. W. and Robinson, J. V.: Review of Emulsified Antifoams for Aircraft Lubricating Oils. TN 1847, March 1949.
- McBain, J. W. and Ross, Sydney: Quantitative Study of Variations in Concentration of Glycerol and Aerosol OT on Foaming Volume of Oil at Room Temperature. TN 1841, April 1949.
- McBain, J. W.; Ross, Sydney; Brady, A. P. and Dean, R. B.: Control of Foaming by Adding Known Mixtures of Pure Chemicals. TN 1842, April 1949.

- Chemistry of Lubrication (Cont.)
- McBain, J. W. and Woods, W. W.: Effect of Various Compounds in Use with Airplane Engines upon Foaming of Aircraft Lubricating Oil. TN 1843, April 1949.
- McBain, J. W.; Robinson, J. V.; Woods, W. W. and Abrams, I. M.: Attempts to Defoam Existing Oils by Processing. TN 1845, April 1949.
- Woods, W. W. and Robinson, J. V.: Aeration of Aircraft Lubricating Oils over a Range of Temperature. TN 1846, April 1949.
- Godfrey, Douglas and Nelson, Erva C.:
 Oxidation Characteristics of Molybdenum Disulfide and Effect of Such
 Oxidation on Its Role as a Solid-Film
 Lubricant. TN 1882, May 1949.

SURFACE CONDITIONS (3.8.1.3)

- Joachim, W. F. and Case, Harold W.: Tests of Several Bearing Materials Lubricated by Gasoline. TN 241, July 1926.
- Jaquerod, A.; Defossez, L. and Mügeli, H.: Experimental Research on the Friction of Pivots. TM 566, May 1930.
- Fischer, G.: Tests of Lead-Bronze Bearings in the DVL Bearing-Testing Machine. TM 943, June 1940.
- Heidebroek, E. and Pietsch, E.: Investigation of Lubricants Under Boundary Friction. TM 1014, May 1942.
- Bobrowsky, A. R. and Machlin, E. S.: Artificial Running-In of Piston Rings. ARR 4C21 (WR E-126), March 1944.
- Bobrowsky, A. R.; Kittel, J. Howard and Boegli, Charles P.: Experimental Study of the Coating Formed on Nitrided-Steel Piston Rings During Operation in Nitrided-Steel Cylinders. ACR 4C31 (WR E-124), March 1944.
- Shames, Sidney J.; Machlin, Eugene S. and Wilson, John G.: Effect of Coaxial Lapping of Cast-Iron Piston Rings on Ring Performance. ARR E4D15 (WR E-54), April 1944.
- McKee, S. A.; White, H. S.; Bell, A. D. and Swindells, J. F.: Performance Characteristics of Journal Bearings with Forced-Feed Lubrication. ARR 4H15 (WR W-54), Aug. 1944.
- Holm, Ragner: The Frictional Force with Respect to the Actual Contact Surface. TM 1074, Aug. 1944.

- Clark, Thomas P.: A Positive-Replica Technique for Examining Finished Metal Surfaces and Its Application to Aircraft-Engine Cylinders. RB E4I07 (WR E-107), Sept. 1944.
- Hersey, Mayo D.: Bibliography on Piston Ring Lubrication. TN 956, Oct. 1944.
- Leary, W. A. and Jovellanos, J. U.: A Study of Piston and Ring Friction. ARR 4J06 (WR W-47), Nov. 1944.
- Kittel, J. Howard and Vierthaler, Walter
 A.: Experimental Study of the Coating
 Found on Scuffed Cast-Iron Piston
 Rings During Operation in NitridedSteel Cylinders. ACR E4K02 (WR
 E-29), Nov. 1944.
- Collins, John H., Jr.; Bisson, Edmond E. and Schmiedlin, Ralph F.: Nitrided-Steel Piston Rings for Engines of High Specific Power. Rept. 817, 1945.
- Nowick, A. S. and Brockway, L. O.: An Electron-Diffraction Examination of Cast-Iron Piston Rings from Single-Cylinder Aircraft-Engine Tests. ACR E4J25 (WR E-144), Feb. 1945.
- Good, J. N. and Brockway, L. O.: An Electron and X-Ray Diffraction Investigation of Surface Changes on Nitrided-Steel Piston Rings During Engine Operation in Nitrided-Steel Cylinder Barrels. ACR E4L27 (WR E-145), March 1945.
- Powell, Allen S.; Clark, Thomas P. and Shaw, Milton C.: Investigation of a Method of Comparison of Metallic Surface Contours by Means of Stereoscopic Electron Micrographs. ARR E5A05a (WR E-59), July 1945.
- Gwathmey, A. T.; Leidheiser, H. and Smith, G.P.: The Chemical Action of Oils on Single Crystals of Metals. TN 982, Nov. 1945.
- Shaw, Milton C. and Nussdorfer, Theodore: Visual Studies of Cylinder Lubrication. I - The Lubrication of the Piston Skirt. Rept. 850, 1946.
- Johnson, Robert L. and Swikert, Max: Single-Cylinder Oil-Control Tests of Porous Chrome-Plated Cylinder Barrels for Radial Air-Cooled Engines. ARR E5L18 (WR E-25), Jan. 1946.
- Johnson, Robert L. and Anderson, Roy I.: Single-Cylinder Engine Tests of Porous Chrome-Plated Cylinder Barrels with Special Bore Coatings for Radial Air-Cooled Engines. ARR E5L18a (WR E-28), Jan. 1946.

- Surface Conditions (Cont.)
- Nowick, A. S. and Brockway, L. O.: Occurrence of Iron Oxides on Cast-Iron Engine Surfaces After Operation. ACR E5L18 (WR E-76), Feb. 1946.
- Clark, Thomas P. and Vierthaler, Walter A.: An Electron-Miscroscope Study of Used Nitrided-Steel Piston Rings. TN 1132, Sept. 1946.
- Powell, Allen S.: Reactions with Steel of Compounds Containing Chemical Groups Used in Lubricants Additives. TN 1207, Feb. 1947.
- Livengood, James C. and Wallour, Chapin: A Study of Piston-Ring Friction. TN 1249, Sept. 1947.
- Good, J. N. and Godfrey, Douglas: Changes Found on Run-In and Scuffed Surfaces of Steel, Chrome Plate, and Cast Iron. TN 1432, Oct. 1947.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.
- Gwathmey, Allan T.; Leidheiser, Henry, Jr. and Smith, G. Pedro: Influence of Crystal Plane and Surrounding Atmosphere on Chemical Activities of Single Crystals of Metals. TN 1460, June 1948.
- Sakmann, B. W. and Rightmire, B. G.: An Investigation of Fretting Corrosion Under Several Conditions of Oxidation. TN 1492, June 1948.
- Woods, W. W. and Robinson, J. V.: Aeration of Aircraft Lubricating Oils over a Range of Temperature. TN 1846, April 1949.
- Godfrey, Douglas and Nelson, Erva C.:
 Oxidation Characteristics of Molybdenum Disulfide and Effect of Such
 Oxidation on Its Role as a Solid-Film
 Lubricant. TN 1882, May 1949.
- Strang, Charles D. and Clark, Thomas P.: Effect of High Shear Rate on Erosion of Common Bearing Metals. TN 1887, June 1949.

SLIDING CONTACT SURFACES

(3.8.2)
do, H. R.: Some Notes on

- Ricardo, H. R.: Some Notes on Gasoline-Engine Development. TM 420, July 1927.
- Anon.: Comments on Crankless Engine Eypes. TM 462, May 1928.

- Jaquerod, A.; Defossez, L. and Mügeli, H.: Experimental Research on the Friction of Pivots. TM 566, May 1930.
- Heidebroek, E. and Pietsch, E.: Investigation of Lubricants Under Boundary Friction. TM 1014, May 1942.
- Ebihara, Keikiti: Researches on the Piston Ring. TM 1057, Feb. 1944.
- Holm, Ragnar: Determination of the Actual Contact Surface of a Brush Contact. TM 1071, Aug. 1944.
- Clark, Thomas P.: A Postive-Replica Technique for Examining Finished Metal Surfaces and Its Application to Aircraft-Engine Cylinders. RB E4107 (WR E-107), Sept. 1944.
- Tischbein, Hans W.: The Friction of Piston Rings. TM 1069, March 1945.
- Shaw, Milton C. and Nussdorfer, Theodore: Visual Studies of Cylinder Lubrication. I - The Lubrication of the Piston Skirt. Rept. 850, 1946.
- Sakmann, B. W.; Grossman, N. and Irvine, John W., Jr.: A Study of Metal Transfer Between Sliding Surfaces. TN 1355, Sept. 1947.
- Good, J. N. and Godfrey, Douglas: Changes Found on Run-in and Scuffed Surfaces of Steel, Chrome Plate, and Cast Iron. TN 1432, Oct. 1947.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.

SLEEVE BEARINGS (3.8.2.1)

- Joachim, W. F. and Case, Harold W.: Tests of Several Bearing Materials Lubricated by Gasoline. TN 241, July 1926.
- Steigenberger, O.: Calculation of the Pressures on Aircraft Engine Bearings. TM 543, Dec. 1929.
- Fischer, G.: Tests of Lead-Bronze Bearings in the DVL Bearing-Testing Machine. TM 943, June 1940.
- Sharp, W. H. and Moore, R. L.: Bearing Tests of Magnesium-Alloy Sheet. TN 897, June 1943.
- McKee, S. A.; White, H. S.; Bell, A. D. and Swindells, J. F.: Performance Characteristics of Journal Bearings with Forced-Feed Lubrication. ARR 4H15 (WR W-54), Aug. 1944.

- Sleeve Bearings (Cont.)
- Shaw, Milton C. and Macks, E. Fred: Radial Aircraft-Engine Bearing Loads. I - Crankpin-Bearing Loads for Engines Having Nine Cylinders per Crankpin. ARR E5H04 (WR E-26), Oct. 1945.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft-Engine Bearing Loads. I - Crankpin-Bearing Loads. ARR E5H10a (WR E-67), Oct. 1945.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft-Engine Bearing Loads. II - Blade-Bearing Loads. ARR E5H10b (WR E-46), Oct. 1945.
- Macks, E. Fred and Shaw, Milton C.: Load Capacity of Aluminum-Alloy Crankpin Bearings as Determined in a Centrifugal Bearing Test Machine. TN 1108, Aug. 1946.
- Shaw, M. C. and Nussdorfer, T. J., Jr.: An Analysis of the Full-Floating Journal Bearing. Rept. 866, 1947.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft Engine Bearing Loads. III - Main-Bearing Loads. TN 1206, Feb. 1947.
- Orloff, P. I.: Coefficient of Friction, Oil Flow and Heat Balance of a Full-Journal Bearing. TM 1165, Oct. 1947.
- Ladanyi, Dezso J.: Effects of Temporal Tangential Bearing Acceleration on Performance Characteristics of Slider and Journal Bearings. TN 1730, Oct. 1948.
- Strang, Charles D. and Clark, Thomas P.: Effect of High Shear Rate on Erosion of Common Bearing Metals. TN 1887, June 1949.
 - CYLINDER AND PISTON MECHANISMS (3.8.2.2)
- Heller, L. A.: The 300 H.P. Benz Aircraft Engine. TN 34, Jan. 1921.
- McDewell, H. S.: Test of Oil Scraper Piston Ring and Piston Fitted with Oil Drain Holes. TN 88, Aug. 1922.
- McDewell, H. S.: Supplementary Report of Oil Scraper Piston Rings. TN 114, Sept. 1922.
- Sparrow, S. W. and Thorne, M. A.: Friction of Aviation Engines. Rept. 262, 1927.
- Kurtz, Oskar: Knowledge Gained from Practical Experience in the Designing of Aircraft Engines. TM 706, May 1933.

- Bobrowsky, A. R. and Machlin, E. S.: Artificial Running-In of Piston Rings. ARR 4C21 (WR E-126), March 1944.
- Bobrowsky, A. R.; Kittel, J. Howard and Boegli, Charles P.: Experimental Study of the Coating Formed on Nitrided-Steel Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4C31 (WR E-143), March 1944.
- Shames, Sidney J.; Machlin, Eugene S. and Wilson, John G.: Effect of Coaxial Lapping of Cast-Iron Piston Rings on Ring Performance. ARR E4D15 (WR E-54), April 1944.
- Hersey, Mayo D.: Bibliography on Piston Ring Lubrication. TN 956, Oct. 1944.
- Boegli, Charles P.: The Hydrodynamic Lubrication of Near-Infinite Sliders Such as Piston Rings. ARR E4722 (WR E-70), Oct. 1944.
- Leary, W. A. and Jovellanos, J. U.: A Study of Piston and Ring Friction. ARR 4J06 (WR W-47), Nov. 1944.
- Kittel, J. Howard and Vierthaler, Walter
 A.: Experimental Study of the Coating
 Found on Scuffed Cast-Iron Piston Rings
 During Operation in Nitrided-Steel
 Cylinders. ACR E4K02 (WR E-29),
 Nov. 1944.
- Collins, John H., Jr.; Bisson, Edmond E. and Schmiedlin, Ralph F.: Nitrided-Steel Piston Rings for Engines of High Specific Power. Rept. 817, 1945.
- Tauschek, Max J. and Corrington, Lester C.: Effect of Progressive Ring Failure on Piston Destruction. ARR E5B07 (WR E-74), Feb. 1945.
- Nowick, A. S. and Brockway, L. O.: An Electron-Diffraction Examination of Cast-Iron Piston Rings from Single-Cylinder Aircraft-Engine Tests. ACR E4J25 (WR E-144), Feb. 1945.
- Good, J. N. and Brockway, L. O.: An Electron and X-Ray Diffraction Investigation of Surface Changes on Nitrided-Steel Piston Rings During Engine Operation in Nitrided-Steel Cylinder Barrels. ACR E4L27 (WR E-145), March 1945.
- Tauschek, Max J.; Corrington, Lester C. and Meigs, John B.: Effect of Oil Flow to Piston on Piston-Ring Sticking and Oil Consumption in a Single-Cylinder Engine. ARR E5E16 (WR E-75), May 1945.
- Nettles, J. C. and Meyer, André J., Jr.: Piston-Ring Vibration and Breakage. ARR E5G06 (WR E-44), Aug. 1945.

- Cylinder and Piston Mechanisms (Cont.)
- Johnson, Robert L. and Swikert, Max: Single-Cylinder Oil-Control Tests of Porous Chrome-Plated Cylinder Barrels for Radial Air-Cooled Engines. ARR E5L18 (WR E-25), Jan. 1946.
- Johnson, Robert L. and Anderson, Roy I.:
 Single-Cylinder Engine Tests of Porous
 Chrome-Plated Cylinder Barrels with
 Special Bore Coatings for Radial AirCooled Engines. ARR E5L18a (WR
 E-28), Jan. 1946.
- Nowick, A. S. and Brockway, L. O.: Occurrence of Iron Oxides on Cast-Iron Engine Surfaces After Operation. ACR E5L18 (WR E-76), Feb. 1946.
- Clark, Thomas P. and Vierthaler, Walter A.: An Electron-Microscope Study of Used Nitrided-Steel Piston Rings. TN 1132, Sept. 1946.
- Livengood, James C. and Wallour, Chapin: A Study of Piston-Ring Friction. TN 1249, Sept. 1947.
- Good, J. N. and Godfrey, Douglas: Changes Found on Run-in and Scuffed Surfaces of Steel, Chrome Plate, and Cast Iron. TN 1432, Oct. 1947.

SLIPPER PLATE BEARINGS (3.8.2.3)

Ladanyi, Dezso J.: Effects of Temporal Tangential Bearing Acceleration on Performance Characteristics of Slider and Journal Bearings. TN 1730, Oct. 1948.

ROLLING CONTACT SURFACES

(3.8.3)

- Norton, F. H.: The Efficiency of Small Bearings in Instruments of the Type Used in Aircraft. Rept. 94, 1920.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.

ANTI-FRICTION BEARINGS (3.8.3.1)

- Ferretti, Pericle: Experiments with Needle Bearings. TM 707, May 1933.
- Getzlaff, Günter: Experiments on Ball and Roller Bearings under Conditions of High Speed and Small Oil Supply. TM 945, July 1940.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.

Macks, E. Fred: Preliminary Investigation of Needle Bearings of 1-1/8-Inch Pitch Diameter at Speeds to 17,000 rpm. TN 1920, Aug. 1949.

SLIDING AND ROLLING CONTACT SURFACES

(3.8.4)

- Shaw, M. C. and Nussdorfer, T. J., Jr.: An Analysis of the Full-Floating Journal Bearing. Rept. 866, 1947.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.
- Macks, E. Fred: Preliminary Investigation of Needle Bearings of 1-1/8-Inch Pitch Diameter at Speeds to 17,000 rpm. TN 1920, Aug. 1949.

GEARS (3.8.4.1)

- Kutzbach, J.: Experience with Geared Propeller Drives for Aviation Engines. TN 16, Sept. 1920.
- Heller, L. A.: The 300 H.P. Benz Aircraft Engine. TN 34, Jan. 1921.
- Matteucci, Raffaelli: Functioning of Reduction Gears on Airplane Engines. TM 352, March 1926.
- Kurtz, Oskar: Knowledge Gained from Practical Experience in the Designing of Aircraft Engines. TM 706, May 1933.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.

LUBRICANTS

(3.8.5)

- Joachim, W. F. and Case, Harold W.: Tests of Several Bearing Materials Lubricated by Gasoline. TN 241, July 1926.
- Hersey, Mayo D.: Viscosity of Diesel Engine Fuel Oil Under Pressure. TN 315, Sept. 1929.
- Heidebroek, E. and Pietsch, E.: Investigation of Lubricants Under Boundary Friction. TM 1014, May 1942.
- Spurr, Robert A. and Olson, Walter T.:
 The Effect of Xylidines on the Load-Carrying Capacity of an Aircraft-Engine Oil I. MR (WR E-157), Aug. 1943.

Lubricants (Cont.)

- Olson, Walter T. and Meyrowitz, Emanuel: The Effect of Xylidines on the Stability of an Aircraft-Engine Lubricating Oil. MR (WR E-158), Aug. 1943.
- Olson, Walter T. and Spurr, Robert A .: The Effect of Xylidines on the Load-Carrying Capacity of an Aircraft-Engine Oil - II. MR (WR E-160), Sept. 1943.
- Tischbein, Hans W.: The Friction of Piston Rings. TM 1069, March 1945.
- Gwathmey, A. T.; Leidheiser, H. and Smith, G. P.: The Chemical Action of Oils on Single Crystals of Metals. TN 982, Nov. 1945.
- Robinson, J. V. and Woods, W. W.: A General Method of Selecting Foam Inhibitors. TN 1025, May 1946.
- Ross, Sydney: Foaming Volume and Foam Stability. TN 1153, Feb. 1947.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities. TN 1442, Oct. 1947.
- Johnson, Robert L.; Godfrey, Douglas and Bisson, Edmond E.: Friction of Solid Films on Steel at High Sliding Velocities. TN 1578, April 1948.
- Johnson, Robert L.; Swikert, Max A. and Bisson, Edmond E.: Friction at High Sliding Velocities of Surfaces Lubricated with Sulfur as an Additive. TN 1720, Oct. 1948.
- Woods, W. W. and Robinson, J. V .: Aeration of Aircraft Lubricating Oils over a Range of Temperature. TN 1846, April 1949.

- Godfrey, Douglas and Nelson, Erva C .: Oxidation Characteristics of Molybdenum Disulfide and Effect of Such Oxidation on Its Role as a Solid-Film Lubricant. TN 1882, May 1949.
- Strang, Charles D. and Clark, Thomas P .: Effect of High Shear Rate on Erosion of Common Bearing Metals. TN 1887, June 1949.

LUBRICATION SYSTEMS

(3.8.6)

- Heller, L. A .: The 300 H.P. Benz Aircraft Engine. TN 34, Jan. 1921.
- Mariamov, N. B.: Theory of Heat Transfer and Hydraulic Resistance of Oil Radiators. TM 1020, June 1942.
- Pinkel, I. Irving and Plumly, Howard D .: A Laboratory-Tested Constant-Level Oil Sump to Prevent Aeration of Scavenged Oil from an Aircraft Engine. MR (WR E-182), April 1944.
- McKee, S. A.; White, H.S.; Bell, A. D. and Swindells, J. F.: Performance Characteristics of Journal Bearings with Forced-Feed Lubrication. ARR 4H15 (WR W-54), Aug. 1944.
- Koffel, William K. and Biermann, Arnold E.: A Unit Laboratory Engine Oil System Providing for a Remote Indication of Oil Flow and Oil Consumption Together with Blow-by Measurements. TN 952, Sept. 1944.
- Pinkel, I. Irving: Breaking Aircraft-Engine Oil Foams by Use of Electrically Charged Condenser Plates. ARR E4K01 (WR E-57), Nov. 1944.

Heat Transfer

(3.9)

- Schey, Oscar W. and Rollin, Vern G.: The Effect of Baffles on the Temperature Distribution and Heat-Transfer Coefficients of Finned Cylinders. Rept. 511, 1934.
- Schey, Oscar W. and Rollin Vern G.: Cooling Characteristics of a 2-Row Radial Engine. Rept. 550, 1935.
- Schey, Oscar W. and Ellerbrock, Herman H., Jr.: Performance of Air-Cooled Engine Cylinders Using Blower Cooling. TN 572, July 1936.
- Schey, Oscar W. and Pinkel, Benjamin: Effect of Several Factors on the Cooling of a Radial Engine in Flight. TN 584, Nov. 1936.
- Schey, Oscar W. and Ellerbrock, Herman H., Jr.: Blower Cooling of Finned Cylinders. Rept. 587, 1937.
- Brevoort, M. J.; Stickle, George W. and Ellerbrock, Herman H., Jr.: Cooling Tests of a Single-Row Radial Engine with Several NACA Cowlings. Rept. 596, 1937.
- Rollin, Vern G. and Ellerbrock, Herman H., Jr.: Pressure Drop Across Finned Cylinders Enclosed in a Jacket. TN 621, Nov. 1937.
- Schey, Oscar W.; Pinkel, Benjamin and Ellerbrock, Herman H., Jr.: Correction of Temperatures of Air-Cooled Engine Cylinders for Variation in Engine and Cooling Conditions. Rept. 645, 1938.
- Pinkel, Benjamin and Ellerbrock, Herman H., Jr.: Correlation of Cooling Data from an Air-Cooled Cylinder and Several Multicylinder Engines. Rept. 683, 1940.
- Ellerbrock, Herman H., Jr.: Heat-Transfer Tests of a Steel Cylinder Barrel with Aluminum Fins with Improved Blending Between Steel Barrel and Aluminum Base. MR (WR E-196), July 1940.
- Ellerbrock, Herman H., Jr.: Heat-Transfer Tests of Two Steel Cylinder Barrels with Aluminum Fins Manufactured by Factory Production Methods. MR (WR E-195), Aug. 1940.

- Ellerbrock, Herman H., Jr. and Mann, Alvin, H.: Heat-Transfer Tests of a Steel Cylinder Barrel with Aluminum Fins of Optimum Proportions. MR (WR E-204), Nov. 1940.
- Ellerbrock, Herman H., Jr. and Bullock, Robert O.: Cooling and Performance Tests of a Continental A-75 Engine. TN 816, July 1941.
- Langley Memorial Aeronautical Laboratory: Construction of Finned Aluminum Muffs for Aircraft-Engine Cylinder Barrels. CB (WR E-81), April 1942.
- Ackeret, J. and Keller, D. C.: Aerodynamic Heat-Power Engine Operating on a Closed Cycle. TM 1034, Nov. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VI - Heat Transfer Equations for the Single Pass Longitudinal Exchanger. ARR (WR W-10), Dec. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. V - Theory and Use of Heat Meters for the Measurements of Rates of Heat Transfer Which are Independent of Time. ARR (WR W-11), Dec. 1942.
- Martinelli, R. C.; Morrin. E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VII - Thermal Radiation from Athermanous Exhaust Gases. ARR (WR W-13), Dec. 1942.
- Sanders, J. C.; Wilsted, H. D. and Mulcahy, B. A.: Operating Temperatures of a Sodium-Cooled Exhaust Valve as Measured by a Thermocouple. Rept. 754, 1943.
- Allen, H. Julian and Look, Bonne C.: A Method for Calculating Heat Transfer in the Laminar Flow Region of Bodies. Rept. 764, 1943.
- Martinelli, R. C.; Guibert, A. G.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VIII A Simplified Method for the Calculation of the Unit Thermal Conductance over Wings. ARR (WR W-14), March 1943.

- Ellerbrock, Herman H., Jr. and Rollin, Vern G.: Correlation of Single-Cylinder Cooling Tests of a Pratt & Whitney R-2800-21 Engine Cylinder with Wind-Tunnel Tests of a Pratt & Whitney R-2800-27 Engine. ARR 3L14 (WR E-127), Dec. 1943.
- Schey, Oscar W.; Rollin, Vern G. and Ellerbrock, Herman H., Jr.: The Effect of Increased Cooling Surface on Performance of Aircraft-Engine Cylinders as Shown by the Tests of the NACA Cylinder. Rept. 779, 1944.
- Wilsted, H. D. and Mulcahy, B. A.: Cylinder-Head Cooling by Means of a Shield in the Exhaust Passage. RB E4F23 (WR E-34), June 1944.
- Neustein, Joseph; Sens, William H. and Buckner, Howard A., Jr.: The Effect of Carburetor-Air Temperature on the Cooling Characteristics of a Typical Air-Cooled Engine Cylinder. ARR E5G10 (WR E-65), Sept. 1945.
- Manganiello, Eugene J. and Bogart, Donald: Piston Heat-Transfer Coefficients Across an Oil Film in a Smooth-Walled Piston Reciprocating-Sleeve Apparatus. ARR E5K08 (WR E-110), Dec. 1945.
- Neustein, Joseph and Schafer, Louis J., Jr.: Comparison of Several Methods of Predicting the Pressure Loss at Altitude Across a Baffled Aircraft-Engine Cylinder. Rept. 858, 1946.
- Moeckel, W. E. and Evvard, J. C.: Determination of Gas Temperatures from the Frequency of Knock-Induced Gas Vibrations in an Internal-Combustion Engine. ARR E6A07 (WR E-132), Jan. 1946.
- Ellerbrock, Herman H., Jr.; Wcislo, Chester R. and Dexter, Howard E.: Analysis, Verification, and Application of Equations and Procedures for Design of Exhaust-Pipe Shrouds. TN 1495, Dec. 1947.
- English, Robert E. and Hauser, Cavour H.: A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.
- Anderson, Robert J.; Ritter, William K. and Parsons, Shirley R.: Apparent Effect of Inlet Temperature on Adiabatic Efficiency of Centrifugal Compressors. TN 1537, Feb. 1948.
- Manson, S. V.: Simulated-Altitude Investigation of Performance of Tubular Aircraft Oil Coolers. TN 1567, April 1948.

THEORY

(3.9.1)

- Harper, D. R., 3d and Brown, W. B.:
 Mathematical Equations for Heat Conduction in the Fins of Air-Cooled
 Engines. Rept. 158, 1922.
- Taylor, C. Fayette and Rehbock, A.: Rate of Heat Transfer from Finned Metal Surfaces. TN 331, Jan. 1930.
- Crocco, Luigi: Transmission of Heat from a Flat Plate to a Fluid Flowing at High Velocity. TM 690, Oct. 1932.
- Doetsch, Hans: The Heat Transfer of Cooling Fins on Moving Air. TM 763, Jan. 1935.
- Ellerbrock, Herman H., Jr. and Biermann, Arnold E.: Surface Heat-Transfer Coefficients of Finned Cylinders. Rept. 676, 1939.
- Silverstein, Abe: Experiments on the Recovery of Waste Heat in Cooling Ducts. ACR, May 1939.
- Brevoort, M. J. and Leifer, M.: Radiator Design and Installation. ACR, May 1939.
- Brevoort, M. J.; Joyner, U. T. and Leifer, M.: Intercooler Design for Aircraft. ACR, Sept. 1939.
- Riekert, P. and Held, A.: Heat Transfer in Geometrically Similar Cylinders. TM 977, May 1941.
- Reuter, J. George and Valerino, Michael F.: Report on Optimum Intercooler Design. RB, Dec. 1941.
- Brevoort, M. J. and Tifford, A. N.: An Experimental Investigation of Flow Across Tube Banks. ARR (WR L-232), March 1942.
- Rubert, Kennedy F. and Knopf, George S.:
 A Method for the Design of Cooling
 Systems for Aircraft Power-Plant Installations. ARR (WR L-491), March
 1942.
- Tifford, Arthur N. and Wood, George P.: Generalized Equations for Selection Charts for Heat Exchangers in Aircraft. ACR (WR L-427), April 1942.
- Mariamov, N. B.: Theory of Heat Transfer and Hydraulic Resistance of Oil Radiators. TM 1020, June 1942.
- Sanders, J. C.; Wilsted, H. D. and Mulcahy, B. A.: Cooling Tests of an Air-Cooled Engine Cylinder with Copper Fins on the Barrel. ACR (WR E-103), July 1942.

Theory (Cont.)

- Foster, H. H. and Sanders, J. C.: Increasing the Cooling of a Steel-Finned Cylinder Barrel by Copperplating. ARR, Sept. 1942.
- Martinelli, R. C.; Tribus, M. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. I - Elementary Heat Transfer Considerations in an Airplane. ARR (WR W-23), Oct. 1942.
- Joyner, Upshur T. and Palmer, Carl B.: An Experimental Survey of Flow Across Banks of Elliptical and Pointed Tubes. ARR (WR L-609), Jan. 1943.
- Seibert, Otto: Heat Transfer of Airfoils and Plates. TM 1044, April 1943.
- Martin, Dennis J.: Selection of Oil Coolers to Avoid Congealing. MR (WR L-744), July 1943.
- Pfriem, H.: Periodic Heat Transfer at Small Pressure Fluctuations. TM 1048, Sept. 1943.
- Schmidt, Ernst and Wenner, Karl: Heat Transfer over the Circumference of a Heated Cylinder in Transverse Flow. TM 1050, Oct. 1943.
- Nichols, Mark R.: An Experimental Investigation of the Intercooler and Charge-Air Duct Systems of the P-60A Airplane. ACR 3J14, Oct. 1943.
- Marquardt, R. E.: A Study of Cooling and Exhaust Disposal in Submerged Engine Installations. ACR 3J28, Oct. 1943.
- Wood, George P.: Use of Stagnation Temperature in Calculating Rate of Heat Transfer in Aircraft Heat Exchangers. RB 3J30 (WR L-298), Oct. 1943.
- Joyner, Upshur T.: Experimental Investigation of Entrance-Region Heat-Transfer Coefficients. ARR 3K01 (WR L-239), Nov. 1943.
- Lelchuk, V. L.: Heat Transfer and Hydraulic Flow Resistance for Streams of High Velocity. TM 1054, Dec. 1943.
- Latsko, H.: Heat Transfer in a Turbulent Liquid or Gas Stream. TM 1068, Oct. 1944.
- Pinkel, Benjamin and Rupert, Kennedy F.:
 Correlation of Wright Aeronautical
 Corporation Cooling Data on the R3350-14 Intermediate Engine and Comparison with Data from the Langley
 16-Foot High-Speed Tunnel. ACR
 E5A18 (WR E-60), Jan. 1945.

- Hicks, Bruce L.: Addition of Heat to a Compressible Fluid in Motion. ACR E5A29 (WR E-88), Feb. 1945.
- Drexel, Roger E. and McAdams, William H.: Heat-Transfer Coefficients for Air Flowing in Round Tubes, in Rectangular Ducts, and Around Finned Cylinders. ARR 4F28 (WR W-108), Feb. 1945.
- Manganiello, E. J. and Stalder, J. R.: Heat-Transfer Tests of Several Engine Coolants. ARR E5B06 (WR E-101), Feb. 1945.
- Kinghorn, George F.; Schroeder, Albert H. and Hagginbothom, William K., Jr.: A Method for Correlating the Cooling Data of Liquid-Cooled Engines and Its Application to the Allison V-3420-11 Engine. MR L5D03 (WR L-782), May 1945.
- Bernardo, Everett and Eian, Carroll S.: Heat-Transfer Tests of Aqueous Ethylene Glycol Solutions in an Electrically Heated Tube. ARR E5F07 (WR E-136), Aug. 1945.
- Johnson, Robert L. and Swikert, Max: Single-Cylinder Oil-Control Tests of Porous Chrome-Plated Cylinder Barrels for Radial Air-Cooled Engines. ARR E5L18 (WR E-25), Jan. 1946.
- Zerbe, John and Selna, James: An Empirical Equation for the Coefficients of Heat Transfer to a Flat Surface from a Plane Heated Air Jet Discharged Tangentially to the Surface. TN 1070, June 1946.
- Brown, W. Byron and Livingood, John N. B.: Cooling of Gas Turbines. III Analysis of Rotor and Blade Temperatures in Liquid-Cooled Gas Turbines. RM E7B11c, Feb. 1947.
- Brown, W. Byron and Monroe, William R.:
 Cooling of Gas Turbines. IV Calculated Temperature Distribution in the
 Trailing Part of a Turbine Blade Using
 Direct Liquid Cooling. RM E7B11d,
 April 1947.
- Wolfenstein, Lincoln; Maxwell, Robert J. and McCarthy, John S.: Cooling of Gas Turbines. V - Effectiveness of Air Cooling of Hollow Blades. RM E7B11e, April 1947.
- Livingood, John N. B. and Sams, Eldon W.:
 Cooling of Gas Turbines. VI Computed Temperature Distribution
 Through Cross Section of WaterCooled Turbine Blade. RM E7B11f,
 May 1947.

Theory (Cont.)

- Pollman, Erich: Temperatures and Stresses on Hollow Blades for Gas Turbines. TM 1183, June 1947.
- Selna, James and Zerbe, John: A Method for Calculating the Heat Required for the Prevention of Fog Formations on the Inside Surfaces of Single Panel Bullet-Resisting Windshields During Diving Flight. TN 1301, July 1947.
- Hicks, Bruce L.; Montgomery, Donald J. and Wasserman, Robert W.: The One-Dimensional Theory of Steady Compressible Fluid Flow in Ducts with Friction and Heat Addition. TN 1336, July 1947.
- Habel, Louis W. and Gallagher, James J.: Tests to Determine the Effect of Heat on the Pressure Drop Through Radiator Tubes. TN 1362, July 1947.
- Orloff, P. I.: Coefficient of Friction, Oil Flow and Heat Balance of a Full-Journal Bearing. TM 1165, Oct. 1947.
- Humble, Leroy V.; Lowdermilk, Warren H. and Grele, Milton: Heat Transfer from High-Temperature Surfaces to Fluids. I Preliminary Investigation with Air in Inconel Tube with Rounded Entrance, Inside Diameter of 0.4 Inch, and Length of 24 Inches. RM E7L31, May 1948.
- Boelter, L. M. K.; Romie, F. E.; Guibert, A. G. and Miller, M. A.: An Investigation of Aircraft Heaters. XXVIII Equations for Steady-State Temperature Distribution Caused by Thermal Sources in Flat Plates Applied to Calculation of Thermocouple Errors, Heat-Meter Corrections, and Heat Transfer by Pin-Fin Plates. TN 1452, Aug. 1948.
- Lundin, Bruce T.; Povolny, John H. and Chelko, Louis J.: Correlation of Cylinder-Head Temperatures of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. RM E8B06, Aug. 1948.
- Povolny, John H. and Lundin, Bruce T.: Correlation of Coolant Heat Rejections of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. RM E8B06a, Aug. 1948.
- Povolny, John H.; Bogdan, Louis J. and Chelko, Louis J.: Effect of Engine and Coolant Variables on Cylinder-Head Temperatures and Coolant Heat Rejection of a Multicylinder Liquid-Cooled Engine of 1650-Cubic-Inch Displacement. RM E8C01, Sept. 1948.

- Valerino, Michael F.: Generalized Charts for Determination of Pressure Drop of a High-Speed Compressible Fluid in Heat-Exchanger Passages. I - Air Heated in Smooth Passages of Constant Area with Constant Wall Temperature. RM E8G23, Oct. 1948.
- Boelter, L. M. K.; Poppendiek, H.; Young, G. and Andersen, J. R.: An Investigation of Aircraft Heaters. XXX Nocturnal Irradiation as a Function of Altitude and Its Use in Determination of Heat Requirements of Aircraft. TN 1454, Jan. 1949.
- Lowdermilk, Warren H. and Grele, Milton D.: Heat Transfer from High-Temperature Surfaces to Fluids. II Correlation of Heat-Transfer and Friction Data for Air Flowing in Inconel Tube with Rounded Entrance. RM E8L03, March 1949.
- Kalikhman, L. E.: Heat Transmission in the Boundary Layer. TM 1229, April 1949.
- Sams, Eldon W. and Desmon, Leland G.:
 Heat Transfer from High-Temperature
 Surfaces to Fluids. III Correlation
 of Heat-Transfer Data for Air Flowing
 in Silicon Carbide Tube with Rounded
 Entrance, Inside Diameter of 3/4 Inch,
 and Effective Length of 12 Inches. RM
 E9D12, June 1949.

HEAT EXCHANGERS

(3.9.2)

- Biermann, Arnold E. and Pinkel, Benjamin: Heat Transfer from Finned Metal Cylinders in an Air Stream. Rept. 488, 1934.
- Biermann, Arnold E.: Heat Transfer from Cylinders Having Closely Spaced Fins. TN 602, May 1937.
- Göthert, B.: The Drag of Airplane Radiators with Special Reference to Air Heating (Comparison of Theory and Experiment). TM 896, May 1939.
- Biermann, Arnold E. and Ellerbrock, Herman H., Jr.: The Design of Fins for Air-Cooled Cylinders. Rept. 726, 1941.
- McLellan, Charles H. and Nichols, Mark R.: An Investigation of Diffuser-Resistance Combinations in Duct Systems. ARR (WR L-329), Feb. 1942.
- Brevoort, M. J. and Tifford, A. N.: An Experimental Investigation of Flow Across Tube Banks. ARR (WR L-232), March 1942.

- Heat Exchangers (Cont.)
- Rubert, Kennedy F. and Knopf, George S.: A Method for the Design of Cooling Systems for Aircraft Power-Plant Installations. ARR (WR L-491), March 1942.
- Tifford, Arthur N. and Wood, George P.: Generalized Equations for Selection Charts for Heat Exchangers in Aircraft. ACR (WR L-427), April 1942.
- Tribus, Myron and Boelter, L. M. K.: An Investigation of Aircraft Heaters. II Properties of Gases. ARR (WR W-9), Oct. 1942.
- Martinelli, R. C.; Weinberg, E. B.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. III Measured and Predicted Performance of Double Tube Heat Exchangers. ARR (WR W-12), Oct. 1942.
- Martinelli, R. C.; Weingerg, E. B.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. IV Measured and Predicted Performance of Longitudinally Finned Tubes. ARR (WR W-98), Oct. 1942.
- Messinger, Bernard L.: The Weight Economy of Extended-Surface Heat Exchangers. ARR, Dec. 1942.
- Joyner, Upshur T. and Palmer, Carl B.: An Experimental Survey of Flow Across Banks of Elliptical and Pointed Tubes. ARR (WR L-609), Jan. 1943.
- Boelter, L. M. K.; Miller, M. A.; Sharp, W. H.; Morrin, E. H.; Iverson, H. W. and Mason, W. E.: An Investigation of Aircraft Heaters. IX Measured and Predicted Performance of Two Exhaust Gas-Air Heat Exchangers and an Apparatus for Evaluating Exhaust Gas-Air Heat Exchangers. ARR (WR W-20), March 1943.
- Boelter, L. M. K.; Dennison, H. G.:
 Guibert, A. G. and Morrin, E. H.: An
 Investigation of Aircraft Heaters.
 X Measured and Predicted Performance of a Fluted-Type Exhaust Gas and
 Air Heat Exchanger. ARR (WR W-16),
 March 1943.
- Boelter, L. M. K.; Miller, M. A.; Sharp, W. H. and Morrin, E. H.: An Investigation of Aircraft Heaters. XI Measured and Predicted Performance of a Slotted-Fin Exhaust Gas and Air Heat Exchanger. ARR 3D16 (WR W-15), April 1943.

- Boelter, L. M. K.; Dennison, H. G.:
 Guibert, A. G. and Morrin, E. H.: An
 Investigation of Aircraft Heaters. XII Performance of a Formed-Plate
 Crossflow Exhaust Gas and Air Heat
 Exchanger. ARR 3E10 (WR W-17),
 May 1943.
- Wood, George P. and Brevoort, Maurice J.: Design, Selection, and Installation of Aircraft Heat Exchangers. ARR 3G31 (WR L-341), July 1943.
- Boelter, L. M. K.; Guibert, A. G.; Miller, M. A. and Morrin, E. H.: An Investigation of Aircraft Heaters. XIII Performance of Corrugated and Noncorrugated Fluted Type Exhaust Gas-Air Heat Exchangers. ARR 3H26 (WR W-18), Aug. 1943.
- Nichols, Mark R.: An Experimental Investigation of the Intercooler and Charge-Air Duct Systems of the P-60a Airplane. ACR 3J14, Oct. 1943.
- Joyner, Upshur T.: Experimental Investigation of Entrance-Region Heat-Transfer Coefficients. ARR 3K01 (WR L-239), Nov. 1943.
- Boelter, L. M. K.; Bromberg, R. and Gier, J. T.: An Investigation of Aircraft Heaters. XV - The Emissivity of Several Materials. ARR 4A21 (WR W-19), Jan. 1944.
- Look, Bonne C.: Flight Tests of the Thermal Ice Prevention Equipment on the B-17F Airplane. ARR 4B02 (WR A-23), Feb. 1944.
- Boelter, L. M. K.; Morrin, E. H.;
 Martinelli, R. C. and Poppendiek, H.
 F.: An Investigation of Aircraft
 Heaters. XIV An Air and Heat Flow
 Analysis of a Ram-Operated Heater
 and Duct System. ARR 4C01 (WR
 W-21), March 1944.
- Jackson, Richard and Hillendahl, Wesley H.: Flight Tests of Several Exhaust-Gas-to-Air Heat Exchangers. ARR 4C14 (WR A-46), March 1944.
- Look, Bonne C. and Selna, James: Flight Tests of Several Exhaust-Gas-to-Air Heat Exchangers in a B-17F Airplane. MR (WR A-29), April 1944.
- Boelter, L. M. K. and Sharp, W. H.: An Investigation of Aircraft Heaters. XVI - Determination of the Viscosity of Exhaust Gases from a Gasoline Engine. ARR 4F24 (WR W-22), June 1944.
- Henry, John R.: Design of Power-Plant Installations Pressure-Loss Characteristics of Duct Components. ARR L4F26 (WR L-208), June 1944.

- Heat Exchangers (Cont.)
- Boelter, L. M. K.; Poppendiek, H. F. and Gier, J. T.: An Investigation of Aircraft Heaters. XVII - Experimental Inquiry into Steady State Unidirectional Heat-Meter Corrections. ARR 4H09 (WR W-24), Aug. 1944.
- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M. and Sloggy, L. J. B.: An Investigation of Aircraft Heaters. XIX - Performance of Two Finned-Type Crossflow Exhaust Gas and Air Heat Exchangers. ARR 4H21 (WR W-25), Aug. 1944.
- Reuter, J. George and Manson, S. V.: Performance Tests of NACA Type a Finned-Tube Exhaust Heat Exchanger. ARR E4H22 (WR E-97), Aug. 1944.
- Boelter, L. M. K.; Poppendiek, H. F.; Dunkle, R. V. and Gier, J. T.: An Investigation of Aircraft Heaters. XXIV - The Heat Meter in the Transient State for Unidirectional Heat Transfer. ARR 4107 (WR W-30), Sept. 1944.
- Boelter, L. M. K.; Guibert, A. G.;
 Rademacher, J. M.; Romie, F. E. and
 Sanders, V. D.: An Investigation of
 Aircraft Heaters. XX Measured and
 Predicted Performance of a FinnedType Cast-Aluminum Crossflow Exhaust Gas and Air Heat Exchanger.
 ARR 5A08 (WR A-28), April 1945.
- Boelter, L. M. K.; Guibert, A. G.;
 Rademacher, J. M.; Romie, F. E.;
 Sanders, V. D. and Sloggy, L. J. B.:
 An Investigation of Aircraft Heaters.
 XXI Measured and Predicted Performance of a Flattened-Tube Type
 Crossflow Exhaust Gas and Air Heat
 Exchanger. ARR 5A10 (WR W-27),
 April 1945.
- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M. and Romie, F. E.: An Investigation of Aircraft Heaters. XXII - Measured and Predicted Performance of a Fluted-Type Exhaust Gas and Air Heat Exchanger. ARR 5A11 (WR W-26), April 1945.
- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M. and Sanders, V. D.: An Investigation of Aircraft Heaters. XXIII - Measured and Predicted Performance of a Flat-Plate Type Exhaust Gas and Air Heat Exchanger. ARR 5A12 (WR W-29), April 1945.
- Boelter, L. M. K.; Bromberg, R.; Gier, J. T. and Dempster, E. R.: An Investigation of Aircraft Heaters. XXV -Use of the Thermopile Radiometer. ARR 5A13 (WR W-88), April 1945.

- Hillendahl, Wesley H.: Comparison of Analytically and Experimentally Determined Isothermal Pressure Losses in a Heat-Exchanger Installation. ARR 5C19 (WR A-26), May 1945.
- Boelter, L. M. K.; Martinelli, R. C.; Romie, F. E. and Morrin, E. H.: An Investigation of Aircraft Heaters. XVIII - A Design Manual for Exhaust-Gas and Air Heat Exchangers. ARR 5A06 (WR W-95), Aug. 1945.
- Look, Bonne C.: Effect on the Performance of a Turbo-Supercharged Engine of an Exhaust-Gas-To-Air Heat Exchange for Thermal Ice-Prevention. MR A5H23 (WR A-30), Aug. 1945.
- Jones, Alun R.: (Based on previously issued reports ARR's 5A03, 5A03a, b, c, 5C20, 5D06, 5G20). An Investigation of a Thermal Ice-Prevention System for a Twin-Engine Transport Airplane. Rept. 862, 1946.
- Wood, George P.: Analytical Investigation of the Use of Regeneration in Compressor-Turbine-Propeller Systems. RM L6109, Sept. 1946
- Tendeland, Thorval and Steinmetz, Charles P.: A Comparative Study of Weights and Sizes of Flat-Plate Exhaust-Gas-To-Air Heat Exchangers With and Without Fins. TN 1312, July 1947.
- Ellerbrock, Herman H., Jr.; Wcislo, Chester R. and Dexter, Howard E.: Analysis, Verification, and Application of Equations and Procedures for Design of Exhaust-Pipe Shrouds. TN 1495, Dec. 1947.
- English, Robert E. and Hauser, Cavour H.:
 A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.
- Colburn, A. P.; Gazley, Carl, Jr.; Schoenborn, E. M. and Sutton, C. S.: Effect of Local Boiling and Air Entrainment on Temperatures of Liquid-Cooled Cylinders. TN 1498, March 1948.
- Manson, S. V.: Simulated-Altitude Investigation of Performance of Tubular Aircraft Oil Coolers. TN 1567, April 1948.
- Boelter, L. M. K.; Dempster, E. R.; Bromberg, R. and Gier, J. T.: An Investigation of Aircraft Heaters. XXVI – Development of a Sensitive Plated—Type Thermopile for Measuring Radiation. TN 1450, July 1948.

Heat Exchangers (Cont.)

- Boelter, L. M. K.; Young, G. and Iversen, H. W.: An Investigation of Aircraft Heaters. XXVII - Distribution of Heat-Transfer Rate in the Entrance Section of a Circular Tube. TN 1451, July 1948.
- Valerino, Michael F.: Generalized Charts for Determination of Pressure Drop of a High-Speed Compressible Fluid in Heat-Exchanger Passages. I - Air Heated in Smooth Passages of Constant Area with Constant Wall Temperature. RM E8G23, Oct. 1948.
- Stalder, Jackson R. and Spies, Ray J., Jr.: An Experimental Investigation of an Exhaust-Gas-to-Air Heat Exchanger for Use on Jet Stack Equipped Engines. RM A8E14, Oct. 1948.
- Boelter, L. M. K.; Guibert, A. G.; Romie, F. E.; Sanders, V. D. and Rademacher, J. M.: An Investigation of Aircraft Heaters. XXXI Summary of Laboratory Testing of Several Exhaust-Gas and Air Heat Exchangers. TN 1455, July 1949.
- Boelter, L. M. K. and Sharp, W. H.: An Investigation of Aircraft Heaters. XXXII - Measurement of Thermal Conductivity of Air and of Exhaust Gases between 50° and 900°F. TN 1912, July 1949.

RADIATORS (3.9.2.1)

- Dickinson, H. C.: Aeronautic Power Plant Investigations. I - Performance of Aeronautic Engines at High Altitudes. II - Radiator Design. III - Spark Plugs. (Subcommittee on Power Plants). Rept. 23, 1917.
- Dickinson, H. C. and Kleinschmidt, R. V.: Synopsis of Aeronautic Radiator Investigations for Years 1917 and 1918. Rept. 43, 1920.
- Dickinson, H. C.; James, W. S. and Kleinschmidt, R. V.: General Analysis of Airplane Radiator Problems. Rept. 59, 1920.
- Dickinson, H. C.; James, W. S. and Brown, W. B.: General Discussion of Test Methods for Radiators. Rept. 60, 1920.
- Kleinschmidt, R. V. and Parsons, S. R.: Heat Resistance Due to Radiators. Rept. 61, 1920.
- James, W. S. and Parsons, S. R.: Effect of Altitude on Radiator Performance. Rept. 62, 1920.

- Dickinson, H. C.; James, W. S. and Kleinschmidt, R. V.: Results of Tests on Radiators for Aircraft Engines. I -Heat Dissipation and Other Properties of Radiators. James, W. S.: II -Water Flow through Radiator Cores. Rept. 63, 1920.
- Parsons, S. R.: Properties of Special Types of Radiators. Rept. 86, 1920.
- Parsons, S. R. and Kleinschmidt, R. V.: Effects of Nature of Cooling Surface on Radiator Performance. Rept. 87, 1920.
- Parsons, S. R.: Pressure Drop in Radiator Air Tubes. Rept. 88, 1920.
- Parsons, S. R.: Turbulence in the Air Tubes of Radiators for Aircraft Engines. Rept. 106, 1921.
- Wieselsberger, C.: Experiments with a Built-In or Fuselage Radiator. TN 141, May 1923.
- Anon.: Experiments on the Resistance of Airplane Wheels and Radiators. TM 269, July 1924.
- Ritcher, L.: Calculation of Tubular Radiators of the Automobile Type. TM 344, Jan. 1926.
- Wilson, E. E.: Steam Power Plants in Aircraft. TN 239, June 1926.
- Smith, R. H.: Resistance and Cooling Power of Various Radiators. Rept. 261, 1927.
- Weick, Fred E.: Full Scale Investigation of the Drag of a Wing Radiator. TN 318, Sept. 1929.
- Weidinger, Hans: Liquid Cooling of Aircraft Engines. TM 649, Dec. 1931.
- Crocco, Luigi: Transmission of Heat from a Flat Plate to a Fluid Flowing at High Velocity. TM 690, Oct. 1932.
- Weise, A.: The Conversion of Energy in a Radiator. TM 869, July 1938.
- Winter, H.: Contribution to the Theory of the Heated Duct Radiator. TM 893, April 1939.
- Brevoort, M. J. and Liefer, M.: Radiator Design and Installation. ACR, May 1939.
- Silverstein, Abe: Experiments on the Recovery of Waste Heat in Cooling Ducts. ACR, May 1939.
- Linke, W.: Experimental Investigations on Freely Exposed Ducted Radiators. TM 970, March 1941.

- Radiators Heat Exchangers (Cont.)
- Brevoort, M. J.: Radiator Design. ACR (WR L-233), July 1941.
- Tifford, Arthur N.: Internally Finned Honeycomb Radiators. ARR (WR L-492), Dec. 1941.
- Harris, Thomas A. and Recant, Isidore G.: Investigation in the 7- by 10-foot Wind Tunnel of Ducts for Cooling Radiators Within an Airplane Wing. Rept. 743, 1942.
- Tifford, Arthur N.: Radiator Designing and Installation II. ACR, Jan. 1942.
- Czarnecki, K. R.: Pressure-Drop Characteristics of Orifice Plates Used to Simulate Radiators. ARR (WR L-342), March 1942.
- Nielsen, Jack N.: High-Altitude Cooling III - Radiators. ARR L4I11b (WR L-773), Sept. 1944.
- Habel, Louis W. and Gallagher, James J.: Tests to Determine the Effect of Heat on the Pressure Drop Through Radiator Tubes. TN 1362, July 1947.
- Manson, S. V.: Simulated-Altitude Investigation of Performance of Tubular Aircraft Oil Coolers. TN 1567, April 1948.

INTERCOOLERS (3.9.2.2)

- Brevoort, M. J.; Joyner, U. T. and Leifer, M.: Intercooler Design for Aircraft. ACR, Sept. 1939.
- Joyner, Upshur T.: Mathematical Analysis of Aircraft Intercooler Design. TN 781, Oct. 1940.
- Reuter, J. George and Valerino, Michael F.: Design Charts for Cross-Flow Tubular Intercoolers Charge-Cross-Tube Type. ACR (WR E-141), Jan. 1941.
- Reuter, J. George and Valerino, Michael F.: Design Charts for Cross-Flow Tubular Intercoolers Charge-Through-Tube Type. ACR (WR E-106), July 1941.
- Reuter, J. George and Valerino, Michael F.: Report on Optimum Intercooler Design. RB, Dec. 1941.
- Pinkel, B.; Reuter, J. George and Valerino, Michael F.: The Cross-Flow Plate-Type Intercooler. ACR (WR E-82), April 1942.

- Nichols, Mark R.: Investigation of Flow Through an Intercooler Set at Various Angles to the Supply Duct. ARR (WR L-408), April 1942.
- Foote, W. R.: A Study of Intercoolers. ARR, June 1942.
- Reuter, J. George and Valerino, Michael F.: Comparison of Intercooler Characteristics. ARR (WR E-102), Nov. 1942.
- Brimley, D. E.: Graphical Representation of Intercooler Parameters and Performance at Altitudes from 25,000 to 60,000 Feet. ARR (WR L-360), Nov. 1942.
- Reuter, J. George and Valerino, Michael F.: An Analysis of the Effect of Core Structure and Performance on Volume and Shape of Cross-Flow Tubular Intercoolers. ARR (WR E-104), Dec. 1942.
- Wood, George P. and Tifford, Arthur N.: Generalized Selection Charts for Harrison and Tubular Intercoolers. ARR (WR L-287), Dec. 1942.
- Wood, George P.: Generalized Selection Charts for Harrison and Tubular Intercoolers. Supplement I - Selection Forms for Harrison Louvered Aluminum Intercoolers. ARR, Dec. 1942.
- Reuter, George J. and Valerino, Michael F.: Intercooler Cooling-Air Weight Flow and Pressure Drop for Minimum Drag Loss. Rept. 784, 1944.
- Rubert, K. F.: High-Altitude Cooling. IV - Intercoolers. ARR L4I11c (WR L-774), Sept. 1944.
- English, Robert E. and Hauser, Cavour H.: A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.

AFTERCOOLERS (3.9.2.3)

Wood, George P. and Brimley, D. E.: A Study of the Effect of Aftercooling on the Power and the Weight of a 2000-Horsepower Air-Cooled Engine Installation. MR (WR L-705), Sept. 1944.

REGENERATORS (3.9.2.4)

Keenan, Joseph H.; Shapiro, Ascher H.; Kaye, Joseph and Rieke, Carol A.: Systems CET, CEHT, and CETX Analysis of a Power Plant of High Efficiency and Great Overload Capacity. ACR 3H31, Aug. 1943. Regenerators - Heat Exchangers (Cont.)

Keenan, Joseph H.; Shapiro, Ascher H. and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device with a Regenerator System PCETXJ. ACR 5B01, April 1945.

Keenan, Joseph; Kaye, Joseph and Rieke, Carol A.: The Calculated Performance of a Jet Propulsion Device Systems CHT, PCHTJ, CchtJ, CHTX. ACR 5B02, Aug. 1945.

English, Robert E. and Hauser, Cavour H.: A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.

OIL COOLERS (3.9.2.5)

Mariamov, N. B.: Theory of Heat Transfer and Hydraulic Resistance of Oil Radiators. TM 1020, June 1942.

Boyet, H.: A Method for Determining Oil-Cooler Performance Requirements in Series Operation. ARR L5G18a (WR L-3), Sept. 1945.

Cooling

(3.10)

- Weick, Fred E.: Full Scale Investigation of the Drag of a Wing Radiator. TN 318, Sept. 1929.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing Cooling Ducts. ACR, Oct. 1938.
- McHugh, James G. and Derring, Eldridge H.: The Effect of Nacelle-Propeller Diameter Ratio on Body Interference and on Propeller and Cooling Characteristics. Rept. 680, 1939.
- Katzoff, S.: The Design of Cooling Ducts with Special Reference to the Boundary Layer at the Inlet. ACR (WR L-321), Dec. 1940.
- Seibert, Otto: Heat Transfer of Airfoils and Plates. TM 1044, April 1943.
- Wood, George P. and Brevoort, Maurice J.: Design, Selection, and Installation of Aircraft Heat Exchangers. ARR 3G31 (WR L-341), July 1943.
- Nelson, W. J. and Czarnecki, K. R.: Wind-Tunnel Investigation of Wing Ducts on a Single-Engine Pursuit Airplane. ARR 3J13 (WR L-407), Oct. 1943.
- Nelson, W. J.; Czarnecki, K. R. and Harrington, Robert D.: Full-Scale Wind-Tunnel Investigation of Forward Underslung Cooling-Air Ducts. ARR L4H15 (WR L-115), Oct. 1944.
- Creagh, John W. R.; Hartmann, Melvin J. and Arthur, W. Lewis, Jr.: An Investigation of Valve-Overlap Scavenging over a Wide Range of Inlet and Exhaust Pressures. TN 1475, Nov. 1947.
- Ellerbrock, Herman H., Jr.; Wcislo, Chester R. and Dexter, Howard E.: Analysis, Verification, and Application of Equations and Procedures for Design of Exhaust-Pipe Shrouds. TN 1495, Dec. 1947.

RECIPROCATING ENGINES

(3.10.1)

- Heller, L. A.: The 300 H.P. Benz Aircraft Engine. TN 34, Jan. 1921.
- Wilson, E. E.: Aircraft Engine Design. TN 211, Jan. 1925.

- Schey, Oscar W.; Johnson, Ernest and Gough, Melvin N.: Comparative Performance Obtained with XF7C-1 Airplane Using Several Different Engine Cowlings. TN 334, Feb. 1930.
- Schey, Oscar W. and Young, Alfred W.:
 A Method for Reducing the Temperature of Exhaust Manifolds. TN 390,
 Sept. 1931.
- Gerrish, Harold C. and Ayer, Bruce E.:
 Influence of Fuel-Oil Temperature on
 the Combustion in a Prechamber
 Compression-Ignition Engine. TN
 565, April 1936.
- Theodorsen, Theodore; Brevoort, M. J. and Stickle, George W.: Cooling of Airplane Engines at Low Air Speeds. Rept. 593, 1937.
- Nickle, F. R. and Freeman, Arthur B.: Full-Scale Wind-Tunnel Investigation of Wing-Cooling Ducts. Effects of Propeller Slipstream. ACR, March 1939.
- Vohrer, Eugen: The Way to Increased Airplane Engine Power. TM 894, May 1939.
- Silverstein, Abe: Experiments on the Recovery of Waste Heat in Cooling Ducts. ACR, May 1939.
- Brevoort, M. J. and Leifer, M.: Radiator Design and Installation. ACR, May 1939.
- Silverstein, Abe and Wilson, Herbert A., Jr.: Aerodynamic Characteristics of a 4-Engine Monoplane Showing Comparison of Air-Cooled and Liquid-Cooled Engine Installations. ACR (WR L-471), July 1939.
- Barth, W.: Theoretical and Experimental Investigations of the Drag of Installed Aircraft Radiators. TM 932, Feb. 1940.
- Pinkel, Benjamin and Manganiello, Eugene J.: A Method of Measuring Piston Temperatures. TN 765, June 1940.
- Draley, Eugene C.: High-Speed Drag Tests of Several Fuselage Shapes in Combination with a Wing. ACR (WR L-542), Aug. 1940.

- Reciprocating Engines (Cont.)
- Becker, John V. and Baals, Donald D.: Wind Tunnel Tests of a Submerged-Engine Fuselage Design. ACR (WR L-485), Oct. 1940.
- Becker, John V.: Wind Tunnel Tests of Air Inlet and Outlet Openings on a Streamline Body. ACR (WR L-300), Nov. 1940.
- Ku, P. M.: Factors Affecting Heat Transfer in the Internal-Combustion Engine. TN 787, Dec. 1940.
- Turner, L. I., Jr.; Biermann, David and Boothby, W. B.: Cooling Tests of an Airplane Equipped with an NACA Cowling and a Wing-Duct Cooling System. TN 813, June 1941.
- Harris, Thomas A. and Recant, Isidore G.: Investigation in the 7- by 10-Foot Wind Tunnel of Ducts for Cooling Radiators Within an Airplane Wing. Rept. 743, 1942.
- Czarnecki, K. R.: Pressure-Drop Characteristics of Orifice Plates Used to Simulate Radiators. ARR (WR L-342), March 1942.
- Rubert, Kennedy F. and Knopf, George S.: A Method for the Design of Cooling Systems for Aircraft Power-Plant Installations. ARR (WR L-491), March 1942.
- Silverstein, Abe and Wilson, Herbert A., Jr.: Cooling in Cruising Flight with Low Fuel-Air Ratios. MR (WR L-570), June 1942.
- Manganiello, Eugene J.: A Preliminary Investigation of Exhaust-Gas Ejectors for Ground Cooling. ACR, July 1942.
- Munger, Maurice; Wilsted, H. D. and Mulcahy, B. A.: The Effect of Valve Cooling upon Maximum Permissible Engine Output as Limited by Knock. TN 861, Sept. 1942.
- Brimley, D. E.: Graphical Representation of Intercooler Parameters and Performance at Altitudes from 25,000 to 60,000 Feet. ARR (WR L-360), Nov. 1942.
- Sanders, J. C.; Wilsted, H. D. and Mulcahy, B. A.: Operating Temperatures of a Sodium-Cooled Exhaust Valve as Measured by a Thermocouple. Rept. 754, 1943.
- Rothrock, Addison M.; Krsek, Alois, Jr. and Jones, Anthony W.: The Induction of Water to the Inlet Air as a Means of Internal Cooling in Aircraft Engine Cylinders. Rept. 756, 1943.

- Brevoort, Maurice J.; Joyner, Upshur T. and Wood, George P.: The Effect of Altitude on Cooling. ARR (WR L-386), March 1943.
- Biermann, Arnold E. and Corrington, Lester C.: Relation of Preignition and Knock to Allowable Engine Temperatures. ARR 3G14 (WR E-134), July 1943.
- Marquardt, R. E.: A Study of Cooling and Exhaust Disposal in Submerged Engine Installations. ACR 3J28, Oct. 1943.
- Rothrock, Addison M.: Use of Internal Coolant as a Means of Permitting Increase in Engine Take-Off Power. RB 4A25 (WR E-117), Jan. 1944.
- Spencer, Robert C.; Jones, Anthony W. and Pfender, John F.: Oxygen Boosting of an Aircraft-Engine Cylinder in Conjunction with Internal Coolants. ACR E4D29 (WR E-16), April 1944.
- Henry, John R.: Design of Power-Plant Installations. Pressure-Loss Characteristics of Duct Components. ARR L4F26 (WR L-208), June 1944.
- Wilsted, H. D. and Mulcahy, B. A.: Cylinder-Head Cooling by Means of a Shield in the Exhaust Passage. RB E4F23 (WR E-34), June 1944.
- Imming, Harry S.: The Effect of Piston-Head Temperature on Knock-Limited Power. ARR E4G13 (WR E-35), July 1944.
- Wear, Jerrold D.; Held, Louis F. and Slough, James W.: Some Effects of Internal Coolants on Knock-Limited and Temperature-Limited Power as Determined in a Single-Cylinder Aircraft Test Engine. ARR E4H31 (WR E-24), Aug. 1944.
- Rothrock, Addison W.: Calculations of Intake-Air Cooling Resulting from Water Injection and of Water Recovery from Exhaust Gas. RB E4H26 (WR E-95), Aug. 1944.
- Corson, Blake W., Jr.: Application of the Method of Least Squares to Engine-Cooling Analysis. ARR L4H23 (WR L-130), Aug. 1944.
- Silverstein, Abe: High-Altitude Cooling.
 I Resume of the Cooling Problem.
 ARR L4I11 (WR L-771), Sept. 1944.
- Katzoff, S.: High-Altitude Cooling. V Cowling and Ducting. ARR L4I11d
 (WR L-775), Sept. 1944.

- Reciprocating Engines (Cont.)
- Cook, Harvey A.; Vandeman, Jack E. and Brown, Kenneth D.: Effect of Several Methods of Increasing Knock-Limited Power on Cylinder Temperatures. ARR E4I15 (WR E-36), Sept. 1944.
- Evvard, John C. and Moeckel, W. E.: An Estimation of the Internal-Cooling Requirements of an Aircraft-Engine Cylinder When Using Oxygen Boost. RB E4K21 (WR E-91), Nov. 1944.
- Bellman, Donald R.; Moeckel, W. E. and Evvard, John C.: Knock-Limited Power Outputs from a CFR Engine Using Internal Coolant. I - Monomethylamine and Dimethylamine. ARR E4L21 (WR E-228), Dec. 1944.
- Bellman, Donald R. and Evvard, John C.: Knock-Limited Performance of Several Internal Coolants. Rept. 812, 1945.
- Zipkin, M. A. and Sanders, J. C.: Correlation of Exhaust-Valve Temperatures with Engine Operating Conditions and Valve Design. Rept. 813, 1945.
- Brimley, D. E. and Brevoort, Maurice J.: Correlation of Engine-Cooling Data. MR L5A17 (WR L-685), Jan. 1945.
- Drexel, Roger E. and McAdams, William H.: Heat-Transfer Coefficients for Air Flowing in Round Tubes, in Rectangular Ducts, and Around Finned Cylinders. ARR 4F28 (WR W-108), Feb. 1945.
- Peters, Max D.: Effect of Increasing the Size of the Valve-Guide Boss on the Exhaust-Valve Temperature and the Volumetric Efficiency of an Aircraft Cylinder. ARR E5A31 (WR E-61), Feb. 1945.
- Cook, Harvey A.; Richard, Paul H. and Brown, Kenneth D.: The Effect of Valve Clearance on Knock-Limited Performance and Engine Cooling. MR E5D18 (WR E-189), April 1945.
- Zeman, J.: Recent Development of the Two-Stroke Engine. II - Design Features. TM 1082, May 1945.
- Biermann, Arnold E.; Miller, George R. and Henneberry, Hugh M.: Economy of Internally Cooling Only the Overheated Cylinders of Aircraft Engines. MR E5G14 (WR E-202), July 1945.
- Biermann, Arnold E.; Henneberry, Hugh M. and Miller, George R.: Control of Cylinder Temperatures by Thermostatically Operated Internal-Coolant Valves. MR E5G16 (WR E-200), July 1945.

- Harris, Herbert B.; Duffy, Robert T. and Erwin, Robert D., Jr.: Effect of Maximum Cruise-Power Operation at Ultra-Lean Mixture and Increased Spark Advance on the Mechanical Condition of Cylinder Components. MR E5127a (WR E-268), Sept. 1945.
- Boyet, H.: A Method for Determining Oil-Cooler Performance Requirements in Series Operation. ARR L5G18a (WR L-3), Sept. 1945.
- Mulcahy, B. A. and Zipkin, M. A.: Tests of Improvements in Exhaust-Valve Performance Resulting from Changes in Exhaust-Valve and Port Design. ARR E5G26 (WR E-45), Sept. 1945.
- Manganiello, Eugene J. and Bogart, Donald:
 Piston Heat-Transfer Coefficients
 Across an Oil Film in a SmoothWalled Piston Reciprocating-Sleeve
 Apparatus. ARR E5K08 (WR E-110),
 Dec. 1945.
- Holms, Arthur G. and Faldetta, Richard D.: Strain-Gage Study of Internally Cooled Exhaust Valves Having Various Throat Designs. TN 1116, Aug. 1946.
- Imming, Harry S. and Bellman, Donald R.: Knock-Limited Power Outputs from a CFR Engine Using Internal Coolants. III - Four Alkyl Amines, Three Alkanolamines, Six Amides, and Eight Heterocyclic Compounds. RM E6L05a, Feb. 1947.
- Creagh, John W. R.; Hartmann, Melvin J. and Arthur, W. Lewis, Jr.: An Investigation of Valve-Overlap Scavenging over a Wide Range of Inlet and Exhaust Pressures. TN 1475, Nov. 1947.
- Sanders, J. C. and Schramm, W. B.:
 Analysis of Variation of Piston Temperature with Piston Dimensions and Undercrown Cooling. RM E8A12, June 1948.

LIQUID COOLED (3.10.1.1)

- Weidinger, Hans: Liquid Cooling of Aircraft Engines. TM 649, Dec. 1931.
- Garlock, E. A. and Ellis, Greer: The Effect on Engine Performance of Change in Jacket-Water Outlet Temperature. TN 476, Nov. 1933.
- Becker, John V. and Baals, Donald D.: Simple Curves for Determining the Effects of Compressibility on Pressure Drop Through Radiators. ACR L4I23 (WR L-6), Sept. 1944.
- Nielsen, Jack N.: High-Altitude Cooling. III - Radiators. ARR L4I11b (WR L-773), Sept. 1944.

- Liquid Cooled Reciprocating Engines (Cont.)
- Kinghorn, George F.; Schroeder, Albert H. and Hagginbothom, William K., Jr.: A Method for Correlating the Cooling Data of Liquid-Cooled Engines and Its Application to the Allison V-3420-11 Engine. MR L5D03 (WR L-782), May 1945.
- Pfender, John F.; Dudugjian, Carl and Lietzke, A. F.: Effect of Engine-Operating Variables and Internal Coolants on Spark-Advance Requirements of an Allison V-1710 Cylinder. MR E5E18 (WR E-198), May 1945.
- Manganiello, Eugene J.; Lundin, Bruce T. and Povolny, John H.: Engine Tests of Pressurized Shunt-Type Cooling Systems for a Liquid-Cooled Engine. ARR E5E01 (WR E-125), May 1945.
- Manganiello, Eugene J. and Bernardo, Everett: Cylinder Temperatures of Two Liquid-Cooled Aircraft Cylinders for Various Engine and Coolant Conditions. ARR E5H13 (WR E-146), Oct. 1945.
- Pinkel, Benjamin; Manganiello, Eugene J. and Bernardo, Everett: Cylinder Temperature Correlation of a Single-Cylinder Liquid-Cooled Engine. Rept. 853, 1946.
- Habel, Louis W. and Gallagher, James J.: Tests to Determine the Effect of Heat on the Pressure Drop Through Radiator Tubes. TN 1362, July 1947.
- Colburn, A. P.; Gazley, Carl, Jr.; Schoenborn, E. M. and Sutton, C. S.: Effect of Local Boiling and Air Entrainment on Temperatures of Liquid-Cooled Cylinders. TN 1498, March 1948.
- Povolny, John H. and Chelko, Louis J.: Cylinder-Head Temperatures and Coolant Heat Rejection of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. TN 1606, June 1948.
- Corrington, Lester C. and Fisher, William F.: Effect of Preignition on Cylinder Temperatures, Pressures, Power Output, and Piston Failures. TN 1637, June 1948.
- Lundin, Bruce T.; Povolny, John H. and Chelko, Louis J.: Correlation of Cylinder-Head Temperatures of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. RM E8B06, Aug. 1948.

- Povolny, John H. and Lundin, Bruce T.: Correlation of Coolant Heat Rejections of a Multicylinder, Liquid-Cooled Engine of 1710-Cubic-Inch Displacement. RM E8B06a, Aug. 1948.
- Povolny, John H.; Bogdan, Louis J. and Chelko, Louis J.: Effect of Engine and Coolant Variables on Cylinder-Head Temperatures and Coolant Heat Rejection of a Multicylinder Liquid-Cooled Engine of 1650-Cubic-Inch Displacement. RM E8C01, Sept. 1948.

AIR COOLED (3.10.1.2)

- Harper, D. R. 3d and Brown, W. B.: Mathematical Equations for Heat Conduction in the Fins of Air-Cooled Engines. Rept. 158, 1922.
- Fedden, A. H.: Fixed Air-Cooled Engines. TM 185, Feb. 1923.
- Anon.: Cooling of Air-Cooled Engines by Forced Circulation of Air. TM 385, Oct. 1926.
- Alcock, J. F.: Air Cooling. An Experimental Method of Evaluating the Cooling Effect of Air Streams on Air-Cooled Cylinders. TM 412, May 1927.
- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwing" Engine in a Cabin Fuselage. TN 301, Nov. 1928.
- Weick, Fred E.: Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine -- I. Rept. 313, 1929.
- Weick, Fred E.: Draw and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine -- II. Rept. 314, 1929.
- Schey, Oscar W. and Biermann, Arnold E.: The Effect of Cowling on Cylinder Temperatures and Performance of a Wright J-5 Engine. Rept. 332, 1929.
- Schey, Oscar W.: The Effect of Fuel Consumption on Cylinder Temperatures and Performance of a Cowled Wright J-5 Engine. TN 328, Nov. 1929.
- Gosslau, F.: Mathematical and Experimental Investigation of Heat Control and Power Increase in Air-Cooled Aircraft Engines. TM 540, Nov. 1929.
- Taylor, C. Fayette and Rehbock, A.: Rate of Heat Transfer from Finned Metal Surfaces. TN 331, Jan. 1930.

- Air Cooled Reciprocating Engines (Cont.)
- McAvoy, William H.; Schey, Oscar W. and Young, Alfred W.: The Effect on Airplane Performance of the Factors that Must be Considered in Applying Low-Drag Cowling to Radial Engines. Rept. 414, 1932.
- Schey, Oscar W. and Biermann, Arnold E.: Heat Dissipation from a Finned Cylinder at Different Fin-Plant/Air-Stream Angles. TN 429, Aug. 1932.
- Löhner, Kurt: Development of Air-Cooled Engines with Blower Cooling. TM 725, Oct. 1933.
- Biermann, Arnold E. and Pinkel, Benjamin: Heat Transfer from Finned Metal Cylinders in an Air Stream. Rept. 488, 1934.
- Schey, Oscar W. and Rollin, Vern G.: The Effect of Baffles on the Temperature Distribution and Heat-Transfer Coefficients of Finned Cylinders. Rept. 511, 1934.
- Schey, Oscar W. and Rollin, Vern G.: Cooling Characteristics of a 2-Row Radial Engine. Rept. 550, 1935.
- Doetsch, Hans: The Heat Transfer of Cooling Fins on Moving Air. TM 763, Jan. 1935.
- Brevoort, M. J. and Rollin, Vern G.: Air Flow Around Finned Cylinders. Rept. 555, 1936.
- Schey, Oscar W. and Ellerbrock, Herman H., Jr.: Performance of Air-Cooled Engine Cylinders Using Blower Cooling. TN 572, July 1936.
- Schey, Oscar W. and Pinkel, Benjamin: Effect of Several Factors on the Cooling of a Radial Engine in Flight. TN 584, Nov. 1936.
- Schey, Oscar W. and Ellerbrock, Herman H., Jr.: Blower Cooling of Finned Cylinders. Rept. 587, 1937.
- Theodorsen, Theodore; Brevoort, M. J. and Stickle, George W.: Full-Scale Tests of NACA Cowlings. Rept. 592, 1937.
- Theodorsen, Theodore; Brevoort, M. J.; Stickle, George W. and Gough, M. N.: Full-Scale Tests of a New Type NACA Nose-Slot Cowling. Rept. 595, 1937.
- Brevoort, M. J.; Stickle, George W. and Ellerbrock, Herman H., Jr.: Cooling Tests of a Single-Row Radial Engine with Several NACA Cowlings. Rept. 596, 1937.

- Biermann, Arnold E.: Heat Transfer from Cylinders Having Closely Spaced Fins. TN 602, May 1937.
- Brevoort, Maurice J.: Energy Loss, Velocity Distribution, and Temperature Distribution for a Baffled Cylinder Model. TN 620, Nov. 1937.
- Rollin, Vern G. and Ellerbrock, Herman H., Jr.: Pressure Drop Across Finned Cylinders Enclosed in a Jacket. TN 621, Nov. 1937.
- Pinkel, Benjamin: Heat-Transfer Processes in Air-Cooled Engine Cylinders. Rept. 612, 1938.
- Schey, Oscar W.; Pinkel, Benjamin and Ellerbrock, Herman H., Jr.: Correction of Temperatures of Air-Cooled Engine Cylinders for Variation in Engine and Cooling Conditions. Rept. 645, 1938.
- Brevoort, Maurice J.: The Effect of Air-Passage Length on the Optimum Fin Spacing for Maximum Cooling. TN 649, May 1938.
- Brevoort, M. J.: Principles Involved in the Cooling of a Finned and Baffled Cylinder. TN 655, June 1938.
- Stickle, George W. and Joyner, Upshur T.:
 The Pressure Available for Ground
 Cooling in Front of the Cowling of AirCooling Airplane Engines. TN 673,
 Nov. 1938.
- Stickle, George W.: Design of NACA Cowlings for Radial Air-Cooled Engines. Rept. 662, 1939.
- Brevoort, M. J. and Joyner, U. T.: Cooling on the Front of an Air-Cooled Engine in a Conventional Engine Cowling. Rept. 674, 1939.
- Ellerbrock, Herman H., Jr. and Biermann, Arnold E.: Surface Heat-Transfer Coefficients of Finned Cylinders. Rept. 676, 1939.
- Biermann, David and Valentine, E. Floyd:
 Preliminary Model Tests of a WingDuct Cooling System for Radial
 Engines. ACR, Feb. 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Blowers of Three Designs Operating in Conjunction with a Wing-Duct Cooling System for Radial Engines. ACR, June 1939.
- Biermann, David and Valentine, E. Floyd: Preliminary Tests of Nose- and Side-Entrance Blower Cooling Systems for Radial Engines. ACR, July 1939.

- Air Cooled Reciprocating Engines (Cont.)
- Biermann, David and Turner, L. I., Jr.: Ground-Cooling and Flight Tests of an Airplane Equipped with a Nose-Blower Engine Cowling. ACR (WR L-478), Oct. 1939.
- Stickle, George W.; Crigler, John L. and Naiman, Irven: The Effect of Streamlining the Afterbody of an NACA Cowling. ACR (WR L-279), Dec. 1939.
- Stickle, George W.; Naiman, Irven and Crigler, John L.: Effect of Exit-Slot Position and Opening on the Available Cooling Pressure for NACA Nose-Slot Cowlings. Rept. 687, 1940.
- Manganiello, Eugene J.: Piston Temperatures in an Air-Cooled Engine for Various Operating Conditions. Rept. 698, 1940.
- McHugh, James G.: Comparison of Three Exit-Area Control Devices on an NACA Cowling. ACR, May 1940.
- Ellerbrock, Herman H., Jr.: Heat-Transfer Tests of a Steel Cylinder Barrel with Aluminum Fins with Improved Blending Between Steel Barrel and Aluminum Base. MR (WR E-196), July 1940.
- Ellerbrock, Herman H., Jr.: Heat-Transfer Tests of Two Steel Cylinder Barrels with Aluminum Fins Manufactured by Factory Production Methods. MR (WR E-195), Aug. 1940.
- Ellerbrock, Herman H., Jr. and Mann, Alvin H.: Heat-Transfer Tests of a Steel Cylinder Barrel with Aluminum Fins of Optimum Proportions. MR (WR E-204), Nov. 1940.
- Pinkel, Benjamin and Ellerbrock, Herman H.: Correlation of Cooling Data from an Air-Cooled Cylinder and Several Multicylinder Engines. Rept. 683, 1941.
- Brevoort, M. J. and Joyner, U. T.: The Problem of Cooling an Air-Cooled Cylinder on an Aircraft Engine. Rept. 719, 1941.
- Stickle, George W.; Naiman, Irven and Crigler, John L.: Pressure Available for Cooling with Cowling Flaps. Rept. 720, 1941.
- Biermann, Arnold E. and Ellerbrock, Herman H., Jr.: The Design of Fins for Air-Cooled Cylinders. Rept. 726, 1941.
- Foster, H. H. and Ellerbrock, H. H., Jr.: Cylinder Barrel Cooling with Bonded Preformed Copper Fins. ACR (WR E-80), May 1941.

- Ellerbrock, Herman H., Jr. and Bullock, Robert O.: Cooling and Performance Tests of a Continental A-75 Engine. TN 816, July 1941.
- McHugh, James G.: Progress Report on Cowlings for Air-Cooled Engines Investigated in the NACA 19-Foot Pressure Wind Tunnel. ARR, July 1941.
- Silverstein, Abe and Guryansky, Eugene R.:
 Development of Cowling for Long-Nose
 Air-Cooled Engine in the NACA FullScale Wind Tunnel. ARR (WR L-24),
 Oct. 1941.
- Robinson, Russell G. and Becker, John V.: High-Speed Tests of Conventional Radial-Engine Cowlings. Rept. 745, 1942.
- Silverstein, Abe and Wilson, Herbert A., Jr.: Drag and Propulsive Characteristics of Air-Cooled Engine-Nacelle Installations for Large Airplanes. Rept. 746, 1942.
- Forbes, J. E. and Taylor, E. S.: Rise in Temperature of the Charge in its Passage Through the Inlet Valve and Port of an Air-Cooled Aircraft Engine Cylinder. TN 839, Jan. 1942.
- Valentine, E. Floyd: Preliminary Investigation Directed Toward Improvement of the NACA Cowling. ARR, April 1942.
- Bailey, F. J., Jr.; Johnston, J. Ford and Voglewede, T. J.: Flight Investigation of the Performance and Cooling Characteristics of a Long-Nose High-Inlet-Velocity Cowling on the XP-42 Airplane. ARR (WR L-356), April 1942.
- Becker, John V.: High-Speed Tests of Radial-Engine Nacelles on a Thick Low-Drag Wing. ACR (WR L-229), May 1942.
- Molloy, Richard C. and Brewster, James H., III: New Research on the Cowling and Cooling of Radial Engines. ARR, May 1942.
- Silverstein, Abe: Tests of Propeller-Speed Cooling Blowers. ARR (WR L-455), July 1942.
- Sanders, J. C.; Wilsted, H. D. and Mulcahy, B. A.: Cooling Tests of an Air-Cooled Engine Cylinder with Copper Fins on the Barrel. ACR (WR E-103), July 1942.
- Foster, H. H. and Sanders, J. C.: Increasing the Cooling of a Steel-Finned Cylinder Barrel by Copperplating. ARR, Sept. 1942.

- Air Cooled Reciprocating Engines (Cont.)
- Lehr, Robert R.; Kinghorn, George F. and Guryansky, Eugene R.: Cooling Investigation of a B-24D Engine-Nacelle Installation in the NACA Full-Scale Tunnel. MR (WR L-689), Nov. 1942.
- Johnston, J. Ford and Cavallo, Stefan A.: Flight Investigation of the Performance and Cooling Characteristics of an NACA C Cowling on the XP-42 Airplane. MR (WR L-612), Nov. 1942.
- Johnston, J. Ford: Review of Flight Tests of NACA C and D Cowlings on the XP-42 Airplane. Rept. 771, 1943.
- Bailey, F. J., Jr. and Johnston, J. Ford:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. I High-Inlet-Velocity Cowling with Propeller Cuffs Tested in High-Speed Level Flight. ARR (WR L-383), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane. II- Low-Inlet-Velocity Cowling with Axial-Flow Fan and Propeller Cuffs. ARR (WR L-243), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Ds Cowlings on the XP-42 Airplane III Low-Inlet-Velocity Cowling Without Fan or Propeller Cuffs, with Axial-Flow Fan Alone, and with Two Different Sets of Propeller Cuffs. ARR (WR L-508), Jan. 1943.
- Johnston, J. Ford and Voglewede, T. J.:
 Flight Investigation of NACA Dg Cowlings on the XP-42 Airplane. IV High-Inlet-Velocity Cowling Tested in Climb with and Without Propeller Cuffs and in High-Speed Level Flight Without Propeller Cuffs. ARR (WR L-285), Jan. 1943.
- Silverstein, Abe: Review of NACA Investigations on Fans for Engine Cooling. ARR, Jan. 1943.
- Brevoort, M. J.; Joyner, U. T. and Wood, George P.: The Reduction of Nonuseful Pressure Losses on Air-Cooled Engine Cylinders by Means of Improved Finning and Baffling. ACR (WR L-686), Feb. 1943.
- Seibert, Otto: Heat Transfer of Airfoils and Plates. TM 1044, April 1943.
- Kinghorn, George F. and Mueller, William A.: Investigation of Methods of Reducing the Temperature Variation Among Cylinders on Air-Cooled Aircraft Engines. MR (WR L-640), July 1943.

- Marquardt, R. E.: A Theoretical and Experimental Investigation of Exhaust Ejectors for Cooling at Low Speeds. ACR 3G05, July 1943.
- Silverstein, Abe and Kinghorn, George F.: Improved Baffle Designs for Air-Cooled Engine Cylinders. ARR 3H16 (WR L-767), Aug. 1943.
- Nichols, Mark R.: An Experimental Investigation of the Intercooler and Charge-Air Duct Systems of the P-60A Airplane. ACR 3J14, Oct. 1943.
- Marquardt, R. E.: Tests of an Annular Ejector System for Cooling Aircraft Engines. ACR 3J27, Oct. 1943.
- Rubert, K. F.; Corson, Blake W., Jr. and Nielsen, Jack; The Advantages of Uniform Fuel Distribution for Air-Cooled Engines from Considerations of Cooling Requirements and Fuel Economy. CB 3L07 (WR L-338), Dec. 1943.
- Ellerbrock, Herman H., Jr. and Rollin, Vern G.: Correlation of Single-Cylinder Cooling Tests of a Pratt & Whitney R-2800-21 Engine Cylinder with Wind-Tunnel Tests of a Pratt & Whitney R-2800-27 Engine. ARR 3L14 (WR E-127), Dec. 1943.
- Schey, Oscar W.; Rollin, Vern G. and Ellerbrock, Herman H., Jr.: The Effect of Increased Cooling Surface on Performance of Aircraft-Engine Cylinders as Shown by the Tests of the NACA Cylinder. Rept. 779, 1944.
- Goldstein, Arthur W. and Ellerbrock, Herman Jr.: Compressibility and Heating Effects on Pressure Loss and Cooling of a Baffled Cylinder Barrel. Rept. 783, 1944.
- Ellisman, Carl: Effect in Flight of the Propeller Cuffs and Spinner on Pressure Recovery in Front of a Double-Row Radial Aircraft Engine in a Twin-Engine Airplane. MR (WR E-169), March 1944.
- Schey, Oscar W.; Rollin, Vern G. and Buckner, Howard A., Jr.: Comparative Cooling of Cylinders of Nonuniform Fin Width with Tight-Fitting Baffles and with Baffles that Provide Constant Flow-Path Areas. ARR E4D21 (WR E-85), April 1944.
- Manganiello, Eugene J. and Bogatsky, Donald: An Experimental Investigation of Rectangular Exhaust-Gas Ejectors Applicable for Engine Cooling. ARR E4E31 (WR E-224), May 1944.

- Air Cooled Reciprocating Engines (Cont.)
- Ellerbrock, Herman H. Jr. and Wilson, Herbert A., Jr.: Cowling and Cooling Tests of a Fleetwings Model 33 Airplane in Flight. MR (WR L-632), May 1944.
- Habel, Louis W. and Korycinski, Peter F.:
 A Comparison of Three Spinner-Diffuser Designs in an NACA D_S Cowling for the Pratt & Whitney R-2800 Engine.
 MR (WR L-579), June 1944.
- Palmer, Carl B. and Brevoort, Maurice J.: The Effect of Cooling-Air Blowers on Thrust Power. ARR L4G24 (WR L-137), July 1944.
- Wood, George P. and Brimley, D. E.: A Study of the Effect of Aftercooling on the Power and the Weight of a 2000-Horsepower Air-Cooled Engine Installation. MR (WR L-705), Sept. 1944.
- Mutterperl, William: High-Altitude Cooling. VI Axial-Flow Fans and Cooling Power. ARR L4II1e (WR L-776), Sept. 1944.
- Corson, Blake W., Jr. and McLellan, Charles H.: Cooling Characteristics of a Pratt & Whitney R-2800 Engine Installed in an NACA Short-Nose High-Inlet-Velocity Cowling. ACR L4F06 (WR L-207), June 1944.
- Williams, David T.: High-Altitude Cooling. II Air-Cooled Engines. ARR L4I11a (WR L-772), Sept. 1944.
- McHugh, James G. and Pepper, Edward:
 The Propeller and Cooling-Air-Flow
 Characteristics of a Twin-Engine Airplane Model Equipped with NACA DsType Cowlings and with Propellers of
 NACA 16-Series Airfoil Sections.
 ACR L4I20 (WR L-638), Sept. 1944.
- Pinkel, Benjamin and Rupert, Kennedy F.:
 Correlation of Wright Aeronautical
 Corporation Cooling Data on the
 R-3350-14 Intermediate Engine and
 Comparison with Data from the
 Langley 16-Foot High-Speed Tunnel.
 ACR E5A18 (WR E-60), Jan. 1945.
- Biermann, Arnold E.; Cook, Harvey A. and Held, Louis F.: Improving Engine Cooling with Special Baffles. ARR E5B05 (WR E-42), Feb. 1945.
- Farmer, J. Elmo and Munger, Maurice: Fuel Consumption Corrected for Cooling Drag of an Air-Cooled Radial Aircraft Engine at Low Fuel-Air Ratios and with Variable Spark Advance. ARR E5B01b (WR E-100), Feb. 1945.

- Gendler, Stanley L. and Geisenheyner, Robert: The Effect of Modified Baffles and Auxiliary-Cooling Ducts on the Cooling of a Wright R-3350 Engine. MR E5C20 (WR E-255), March 1945.
- Jagger, James M. and Black, Fred O., Jr.:
 A Cooling Correlation Equation for a
 Double-Row Radial Engine Based on the
 Temperature of the Exhaust-Valve
 Seat. MR E5D30a (WR E-201), April
 1945.
- Vandeman, J. E. and Heinicke, O. H.: Effect of Water-Alcohol Injection and Maximum-Economy Spark Advance on Knock-Limited Performance and Fuel Economy of a Wright R-3350 Rear-Row Cylinder. MR E5H12 (WR E-264), Aug. 1945.
- Neustein, Joseph; Sens, William H. and Buckner, Howard A., Jr.: The Effect of Carburetor-Air Temperature on the Cooling Characteristics of a Typical Air-Cooled Engine Cylinder. ARR E5G10 (WR E-65), Sept. 1945.
- Bellman, Donald R.; Moeckel, W. E. and Evvard, John C.: Knock-Limited Power Outputs from a CFR Engine Using Internal Coolants. II - Six Aliphatic Amines. ACR E5H31 (WR E-219), Oct. 1945.
- Wilson, Robert W.; Richard, Paul H. and Brown, Kenneth D.: Correlation of the Characteristics of Single-Cylinder and Flight Engines in Tests of High-Performance Fuels in a Pratt & Whitney R-1830-94 Engine. I - Cooling Characteristics. MR E5J04 (WR E-271), Oct. 1945.
- Brown, Kenneth D.; Richard, Paul H. and Wilson, Robert W.: Correlation of the Characteristics of Single-Cylinder and Flight Engines in Tests of High-Performance Fuels in a Pratt & Whitney R-1830-94 Engine. II Knock-Limited Charge-Air Flow and Cylinder Temperatures. MR E5J12 (WR E-272), Oct. 1945.
- Marble, Frank E.; Butze, Helmut F. and Hickel, Robert O.: Study of the Mixture Distribution of a Double-Row Radial Aircraft Engine. ARR E5105 (WR E-47), Oct. 1945.
- Neustein, Joseph and Schafer, Louis J., Jr.: Comparison of Several Methods of Predicting the Pressure Loss at Altitude Across a Baffled Aircraft-Engine Cylinder. Rept. 858, May 1946.

- Air Cooled Reciprocating Engines (Cont.)
- Marble, Frank E.: Miller, Mahlon A. and Bell, E. Barton: Analysis of Cooling Limitations and Effect of Engine-Cooling Improvements on Level-Flight Cruising Performance of a Four-Engine Heavy Bomber. Rept. 860, 1946.
- Spencer, Robert C.; Petring, F. William and Prince, William R.: Ground-Stand Cooling Investigation of an R-2600-22 Engine in a PBM-3D Nacelle. MR L5L18 (WR L-754), Jan. 1946.
- Sipko, Michael A.; Hickel, Robert O. and Jones, Robert J.: Test-Stand Investigation of Cooling Characteristics and Factors Affecting Temperature Distribution of a Double-Row Radial Aircraft Engine. ARR E6C01 (WR E-19), March 1946.
- Kuenzig, John K. and Palter, Herman: Aerodynamics of the Carburetor Air Scoop and the Engine Cowling of the XTB2D-1 Airplane. MR E6E27 (WR E-280), June 1946.
- Bell, E. Barton; Morgan, James E.; Disher, John H. and Mercer, Jack R.: Flight Investigation of the Cooling Characteristics of a Two-Row Radial Engine Installation. I - Cooling Correlation. TN 1092, July 1946.
- Hill, John E.; Blackman, Calvin C. and Morgan, James E.: Flight Investigation of the Cooling Characteristics of a Two-Row Radial Engine Installation. II - Cooling-Air Pressure Recovery and Pressure Distribution. TN 1109, July 1946.
- Sipko, Michael A.; Cotton, Charles B. and Lusk, James B.: Use of Ducted Heat Baffles to Reduce Rear-Row Cylinder Temperatures of an Air-Cooled Aircraft Engine. TN 1053, August 1946.
- Rennak, Robert M.; Messing, Wesley E. and Morgan, James E.: Flight Investigation of the Cooling Characteristics of a Two-Row Radial Engine Installation. III Engine Temperature Distribution. TN 1147, Oct. 1946.
- Manganiello, Eugene J.; Valerino, Michael F. and Bell, E. Barton: High Altitude Flight Cooling Investigation of a Radial Air-Cooled Engine. Rept. 873, 1947.
- Kahane, A.: Charts of Pressure Rise Obtainable with Airfoil-Type Axial-Flow Cooling Fans. TN 1199, March 1947.
- Valerino, Michael F.; Kaufman, Samuel J. and Hughes, Richard F.: Effect of Exhaust Pressure on the Cooling Characteristics of an Air-Cooled Engine. TN 1221, March 1947.
- Lewis, James P.: Wind-Tunnel Investigation of Icing of an Engine Cooling-Fan Installation. TN 1246, April 1947.

- Monroe, Louis L. and Friedman, Harold E.: Cooling of a Wright R-3350 Engine by Water Injection to the Individual Cylinders. MR E5B27 (WR E-254), Feb. 1945.
- Koenig, Robert J. and Engelman, Helmuth W.: A Cooling Correlation of the Wright R-2600-8 Engine Showing the Effect of Water as an Internal Coolant. ARR E5A29 (WR E-20), Feb. 1945.
- Marble, Frank E.; Miller, Mahlon A. and Vensel, Joseph R.: Effect of NACA injection Impeller and Ducted Head Baffles on Flight Cooling Performance of Wright R-3350 Engine in Boeing B-29 Airplane. MR E5D13 (WR E-256), April 1945.
- Valerino, Michael F. and Kaufman, Samuel J.: Cylinder-Temperature and Cooling-Air-Pressure Instrumentation for Air-Cooled Engine Cooling Investigations. TN 1509, Jan. 1948.

GAS TURBINE SYSTEMS

(3.10.2)

- Rubert, K. F.: High-Altitude Cooling. IV - Intercoolers. ARR L4I11c (WR L-774), Sept. 1944.
- Holms, Arthur G. and Faldetta, Richard D.: Effects of Temperature Distribution and Elastic Properties of Materials on Gas-Turbine Disk Stresses. Rept. 864, 1947.
- Brown, W. Bryon and Livingood, John N. B.: Cooling of Gas Turbines. III Analysis of Rotor and Blade Temperatures in Liquid-Cooled Gas Turbines. RM E7B11c, Feb. 1947.
- Sanders, J. C. and Mendelson, Alexander: Theoretical Evaluation of Methods of Cooling the Blades of Gas Turbines. RM E7B11g, Feb. 1947.
- Brown, W. Bryon and Monroe, William R.:
 Cooling of Gas Turbines. IV Calculated Temperature Distribution in the
 Trailing Part of a Turbine Blade Using
 Direct Liquid Cooling. RM E7B11d,
 April 1947.
- Wolfenstein, Lincoln; Maxwell, Robert J. and McCarthy, John S.: Cooling of Gas Turbines. V Effectiveness of Air Cooling of Hollow Blades. RM E7B11e, April 1947.
- Livingood, John N. B. and Sams, Eldon W.: Cooling of Gas Turbines. VI - Computed Temperature Distribution through Cross Section of Water-Cooled Turbine Blade. RM E7B11f, May 1947.
- Pollman, Erich: Temperatures and Stresses on Hollow Blades for Gas Turbines. TM 1183, June 1947.

Properties of Gases

(3.11)

- The Ferrosilicon Process for the Generation of Hydrogen. I E. R. Weaver, W. M. Berry, and V. L. Bohnson. II E. R. Weaver and B. D. Gordon. III B. D. Gordon. Rept. 40, 1920.
- Edwards, Junius David: Testing of Balloon Gas. Rept. 41, 1920.
- Stevens, F. W.: A Constant Pressure Bomb. Rept. 176, 1923.
- Havill, Lieut. Comdr. Clinton H.: Helium Tables. TN 276, Jan. 1928.
- Gerrish, Harold C. and Tessmann, Arthur M.: Relation of Hydrogen and Methane to Carbon Monoxide in Exhaust Gases from Internal-Combustion Engines. Rept. 476, 1933.
- Taylor, E. S.: The Thermodynamics of Combustion in the Otto Cycle Engine. TN 533, June 1935.
- Gerrish, Harold C. and Voss, Fred: Interrelation of Exhaust-Gas Constituents. Rept. 616, 1937.
- Ellerbrock, Herman H., Jr. and Goldstein, Arthur W.: Effect of Humidity on Several Supercharger Parameters. ARR (WR E-51), Nov. 1941.
- Pearson, H. A.: Progress in the Investigation of Condensation Trails Left by Airplanes in Flight. CB, March 1942.
- Rhode, Richard V.: Observation of Condensation Trails Formed by XC-35, Airplane Over Langley Field, Va., July 17, 1941. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Notes on Prediction and Elimination of Exhaust Type Condensation Trails. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Condensation Trails - Where They Occur and What Can Be Done About Them. CB (WR L-474), Sept. 1942.
- Tribus, Myron and Boelter, L. M. K.: An Investigation of Aircraft Heaters. II - Properties of Gases. ARR (WR W-9), Oct. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VII - Thermal Radiation from Athermanous Exhaust Gases. ARR (WR W-13), Dec. 1942.

- McCann, W. J.: Thermodynamic Charts for Internal-Combustion-Engine Fluids. RB 3G28, July 1943.
- Pinkel, Benjamin and Turner, L. Richard: Thermodynamic Data for the Computation of the Performance of Exhaust-Gas Turbines. ARR 4B25 (WR E-23), Feb. 1944.
- Kantrowitz, Arthur and Huber, Paul W.: Heat-Capacity Lag in Turbine-Working Fluids. RB L4E29 (WR L-21), May 1944.
- Boelter, L. M. K. and Sharp, W. H.: An Investigation of Aircraft Heaters. XVI - Determination of the Viscosity of Exhaust Gases from a Gasoline Engine. ARR 4F24 (WR W-22), June 1944.
- Benser, William A.; Wilcox, Ward W. and Voit, Charles H.: Charts for the Rapid Calculation of the Work Required to Compress Dry Air. TN 1043, April 1946.
- Hottel, H. C. and Williams, G. C.: Charts of Thermodynamic Properties of Fluids Encountered in Calculations of Internal Combustion Engine Cycles. TN 1026, May 1946.
- Turner, L. Richard and Lord, Albert M.:
 Thermodynamic Charts for the Computation of Combustion and Mixture
 Temperatures at Constant Pressure.
 TN 1086, June 1946.
- Fuchs, N.: Concerning the Velocity of Evaporation of Small Droplets in a Gas Atmosphere. TM 1160, Aug. 1947.
- Ellerbrock, Herman H., Jr.; Wcislo, Chester R. and Dexter, Howard E.: Analysis, Verification, and Application of Equations and Procedures for Design of Exhaust-Pipe Shrouds. TN 1495, Dec. 1947.
- English, Robert E. and Hauser, Cavour H.:
 A Method of Cycle Analysis for Aircraft Gas-Turbine Power Plants Driving Propellers. TN 1497, Jan. 1948.
- Hensley, Reece V.: Mollier Diagrams for Air Saturated with Water Vapor at Low Temperatures. TN 1715, Sept. 1948.
- Wiener, Bernard: Ambient Pressure Determination at High Altitudes by Use of Free-Molecule Theory. TN 1821, March 1949.

STRUCTURES (4)

STRI

Columns

(4.1)

- Natalis, Fr.: Crippling Strength of Axially Loaded Rods. TN 31, Oct. 1921.
- Lundquist, Eugene E. and Kroll, W. D.: Tables of Stiffness and Carry-Over Factor for Structural Members Under Axial Load. TN 652, June 1938.
- Lundquist, Eugene, E.: Generalized Analysis of Experimental Observations in Problems of Elastic Stability. TN 658, July 1938.
- Lundquist, Eugene E.: A Method of Estimating the Critical Buckling Load for Structural Members. TN 717, July 1939.
- Lundquist, Eugene E. and Kroll, W. D.: Extended Tables of Stiffness and Carry-Over Factor for Structural Members Under Axial Load. ARR 4B24 (WR L-255), Feb. 1944.
- Ilyushin, A. A.: Stability of Plates and Shells Beyond the Proportional Limit. TM 1116, Oct. 1947.
- Stowell, Elbridge Z.: A Unified Theory of Plastic Buckling of Columns and Plates. TN 1556, April 1948.

TUBULAR

(4.1.1)

- Hall, Charles Ward: Structural Weight of Aircraft as Affected by the System of Design. TN 206, Nov. 1924.
- Ross, Orrin E.: Curves Showing Column Strength of Steel and Duralumin Tubing. TN 306, May 1929.
- Schroeder, August: Buckling Tests of Light-Metal Tubes. TM 525, Aug. 1929.
- Pollard, H. J.: Metal Construction Development. I General Strip Metal Construction Fuselage. TM 526, Aug. 1929.
- Hartmann, E. C.: Comparison of Weights of 17ST and Steel Tubular Structural Members Used in Aircraft Construction. TN 378, May 1931.
- Holt, M. and Hartmann, E. C.: Increasing the Strength of Aluminum-Alloy Columns by Prestressing. TN 618, Oct. 1937.

- Osgood, William R.: Column Strength of Tubes Elastically Restrained Against Rotation at the Ends. Rept. 615, 1938.
- Osgood, William R.: The Crinkling Strength and the Bending Strength of Round Aircraft Tubing. Rept. 632, 1938.
- Lazzarino, Lucio: Twisting of Thin Walled Columns Perfectly Restrained at One End. TM 854, March 1938.
- Müller, J.: Increase of the Specific Load Under Tension, Compression, and Buckling of Welded Steel Tubes in Airplane Construction by Suitable Treatment of Structural Steel and by Proper Design. TM 912, Oct. 1939.
- Osgood, William R.: Round Heat-Treated Chromium-Molybdenum-Steel Tubing Under Combined Loads. TN 896, July 1943.
- Demer, L. J. and Kavanaugh, E. S.: Ovalization of Tubes Under Bending and Compression. TN 922, March 1944.
- Budiansky, Bernard; Stein, Manuel and Gilbert, Arthur C.: Buckling of a Long Square Tube in Torsion and Compression. TN 1751, Nov. 1948.

BEAM

(4.1.2)

- Nelson, John H.: The Strength of One-Piece Solid, Built-Up, and Laminated Wood Airplane Wing Beams. Rept. 35, 1919.
- Ratzersdorfer, Julius: Calculation of Wing Spars. TM 34, Aug. 1921.
- Truscott, Starr: The Stresses in Columns Under Combined Axial and Side Loads. TM 110, July 1922.
- Hoff, Wilhelm: Computative Examination of Bending Strength of Girders Originally Curved and Subjected to Longitudinal Compression. TM 151, Oct. 1922.
- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength, III Stresses in Wood Members Subjected to Combined Column and Beam Action. Rept. 188, 1924.

Beam (Cont.)

- Warner, Edward P. and Short, Mac: Approximations for Column Effect in Airplane Wing Spars. Rept. 251, 1927.
- Tuckerman, L. B.; Petrenko, S. N. and Johnson, C. D.: Strength of Tubing Under Combined Axial and Transverse Loading. TN 307, June 1929.
- Newlin, J. A. and Trayer, Geo. W.: A Method of Calculating the Ultimate Strength of Continuous Beams. Rept. 347, 1930.
- Hartmann, E. C.: Comparison of Weights of 17ST and Steel Tubular Structural Members Used in Aircraft Construction. TN 378, May 1931.
- Seewald, Friedrich: Determination of Stresses and Deformations of Aircraft Propellers. TM 670, May 1932.
- Schwartz, A. Murray: Analysis of a Strut with a Single Elastic Support in the Span, with Applications to the Design of Airplane Jury-Strut Systems. I - Derivation of Formulas. Bogert, Reid: II - Experimental Investigation of Formulas. TN 529, May 1935.
- James, Benjamin Wylie: Principal Effects of Axial Load on Moment-Distribution Analysis of Rigid Structures. TN 534, July 1935.
- Burke, Walter F.: A Deflection Formula for Single-Span Beams of Constant Section Subjected to Combined Axial and Transverse Loads. TN 540, Sept. 1935.
- Kaul, Hans W.: The Stress Criterion of a Tension Member with Graded Flexural Stiffness. TM 804, Sept. 1936.
- Bleakney, William M.: Fatigue Testing of Wing Beams by the Resonance Method. TN 660, Aug. 1938.
- Gottlieb, R.; Thompson, T. M. and Witt, E. C.: Combined Beam-Column Stresses of Aluminum-Alloy Channel Sections. TN 726, Sept. 1939.
- Cassens, J.: Tables for Computing Various Cases of Beam Columns. TM 985, Aug. 1941.
- Hutton, J. O.: Combined Beam Column Stresses of Aluminum-Alloy Channel Sections. TN 824, Sept. 1941.
- Cassens, J.: Buckling Tests on Eccentrically Loaded Beam Columns. TM 989, Oct. 1941.

- Niles, Alfred S. and Viscovich, Steven J.: Stability of Elastically Supported Columns. TN 871, Nov. 1942.
- Osgood, William R.: Round Heat-Treated Chromium-Molybdenum-Steel Tubing Under Combined Loads. TN 896, July 1943.
- Ballhaus, W. F. and Niles, A. S.: Simplified Truss Stability Criteria. TN 937, July 1944.
- Brueggeman, W. C.; Krupen, P. and Roop, F. C.: Axial Fatigue Tests of 10 Airplane Wing-Beam Specimens by the Resonance Method. TN 959, Dec. 1944.
- Lundquist, Eugene E.; Stowell, Elbridge Z. and Schuette, Evan H.: Principles of Moment Distribution Applied to Stability of Structures Composed of Bars or Plates. Rept. 809, 1945.
- Ramberg, Walter; McPherson, A. E. and Levy, Samuel: Strength of Wing Beams Under Axial and Transverse Loads. TN 988, Sept. 1945.
- Ruffner, B. F.: Stress Analysis of Columns and Beam Columns by the Photoelastic Method. TN 1002, March 1946.
- Hu, Pai C. and Libove, Charles: A Relaxation Procedure for the Stress Analysis of a Continuous Beam-Column Elastically Restrained Against Deflection and Rotation at the Supports. TN 1150, Oct. 1946.
- Marguerre, Karl: On the Application of the Energy Method to Stability Problems. TM 1138, Oct. 1947.
- Budiansky, Bernard; Seide, Paul and Weinberger, Robert A.: The Buckling of a Column on Equally Spaced Deflectional and Rotational Springs. TN 1519, March 1948.
- Seide, Paul and Eppler, John F.: The Buckling of Parallel Simply Supported Tension and Compression Members Connected by Elastic Deflectional Springs. TN 1823, Feb. 1949.

SECTIONS

(4.1.3)

- McCarthy, Charles J.: Notes on the Design of Latticed Columns Subject to Lateral Loads. TN 98, May 1922.
- Schwamb, T. A. and Smith, C. S.: Tests on Built-Up Airplane Struts Having Initial Tension in Outside Fibers. TN 151, Aug. 1923.
- Lewe, Viktor: Compressive Strength of Tapered Airplane Struts. TN 171, Dec. 1923.

Sections (Cont.)

- Lee, John G.: Tests on Duralumin Columns for Aircraft Construction. TN 208, Nov. 1924.
- Wagner, Herbert: Remarks on Airplane Struts and Girders Under Compressive and Bending Stresses. Index Values. TM 500, Feb. 1929.
- Pollard, H. J.: Metal Construction Development. Part III Workshop Practice Strip Metal Construction Wing Ribs. TM 528, Aug. 1929.
- Pollard, H. J.: Metal Construction Development. Part IV Moments of Inertia of Thin Corrugated Sections. TM 529, Sept. 1929.
- Trayer, George W. and March, H. W.: The Torsion of Members Having Sections Common in Aircraft Construction. Rept. 334, 1930.
- Trayer, George W. and March, H. W.: Elastic Instability of Members Having Sections Common in Aircraft Construction. Rept 382, 1931.
- Lundquist, Eugene E.: The Compressive Strength of Duralumin Columns of Equal Angle Section. TN 413, March 1932.
- Koning, Carel and Taub, Josef: Impact Buckling of Thin Bars in the Elastic Range Hinged at Both Ends. TM 748, June 1934.
- Taub, Josef: Impact Buckling of Thin Bars in the Elastic Range for Any End Condition. TM 749, July 1934.
- Wagner, H. and Pretschner, W.: Torsion and Buckling of Open Sections. TM 784, Jan. 1936.
- Borkmann, K.: Charts for Checking the Stability of Compression Members in Trusses. TM 800, July 1936.
- Wagner, Herbert: Torsion and Buckling of Open Sections. TM 807, Oct. 1936.
- Lundquist, Eugene E. and Fligg, Claude M.:
 A Theory for Primary Failure of
 Straight Centrally Loaded Columns.
 Rept. 582, 1937.
- Goodyear-Zeppelin Corporation: Preliminary Fatigue Studies on Aluminum Alloy Aircraft Girders. TN 637, Feb. 1938.
- Kappus, Robert: Twisting Failure of Centrally Loaded Open-Section Columns in the Elastic Range. TM 851, March 1938.

- Radomski, B.: Compression Struts with Non-progressively Variable Moment of Inertia. TM 861, May 1938.
- Osgood, William R. and Holt, Marshall: The Column Strength of Two Extruded Aluminum-Alloy H-Sections. Rept. 656, 1939.
- Lundquist, Eugene E.: Local Instability of Symmetrical Rectangular Tubes Under Axial Compression. TN 686, Feb. 1939.
- Lundquist, Eugene E.: Local Instability of Centrally Loaded Columns of Channel Section and Z-Section. TN 722, Aug. 1939.
- Niles, Alfred S.: Experimental Study of Torsional Column Failure. TN 733, Oct. 1939.
- Lundquist, Eugene E. and Kotanchik,
 Joseph N.: The Effect of Initial Displacement of the Center Support on the
 Buckling of a Column Continuous Over
 Three Supports. ACR (WR L-256),
 Nov. 1940.
- Templin, R. L.; Howell, F. M. and Hartmann, E. C.: The Compressive Yield Strength of Extruded Shapes of 24ST Aluminum Alloy. TN 793, Jan. 1941.
- Hill, H. N.: Compression Tests of Some 17S-T Aluminum-Alloy Specimens of I Cross Section. TN 798, March 1941.
- Rossman, Carl A.: Tensile and Compressive Stress-Strain Curves and Flat-End Column Strength for Extruded Magnesium Alloy J-1. ARR (WR L-604), April 1942.
- Kuhn, Paul and Moggio, Edwin M.: The Longitudinal Shear Strength Required in Double-Angle Columns of 24S-T Aluminum Alloy. RB 3E08 (WR L-472), May 1943.
- Holt, M.: Column Strength of Magnesium Alloy AM-57S. TN 899, July 1943.
- Lundquist, Eugene E.; Rossman, Carl A. and Houbolt, John C.: A Method for Determining the Column Curve from Tests of Columns with Equal Restraints Against Rotation on the Ends. TN 903, Aug. 1943.
- Heimerl, George J. and Roy, J. Albert:
 Preliminary Report on Tests of 24S-T
 Aluminum-Alloy Columns of Z-,
 Channel, and H-Section that Develop
 Local Instability. RB 3J27 (WR L-333),
 Oct. 1943.

Sections (Cont.)

- Kroll, W. D.; Fisher, Gordon P. and Heimerl, George J.: Charts for Calculation of the Critical Stress for Local Instability of Columns with I-, Z-, Channel, and Rectangular-Tube Section. ARR 3K04 (WR L-429), Nov. 1943.
- Niles, Alfred S.: Elastic Properties of Channels with Unflanged Lightening Holes. TN 924, March 1944.
- Brueggeman, W. C. and Mayer, M., Jr.: Guides for Preventing Buckling in Axial Fatigue Tests of Thin Sheet-Metal Specimens. TN 931, April 1944.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strength of Extruded XB75S-T Aluminum Alloy. RB L4E26, May 1944.
- Schuette, Evan H. and Roy, J. Albert: The Determination of Effective Column Length from Strain Measurements. ARR L4F24 (WR L-198), June 1944.
- Roy, J. Albert and Schuette, Evan H.: The Effect of Angle of Bend Between Plate Elements on the Local Instability of Formed Z-Sections. RB L4I26, (WR L-268), Sept. 1944.
- Heimerl, George J. and Roy, J. Albert: Determination of Desirable Lengths of Z- and Channel-Section Columns for Local-Instability Tests. RB L4H10 (WR L-180), Oct. 1944.
- Reinitzhuber, F.: Calculation of Centrally Loaded Thin-Walled Columns Above the Buckling Limit. TM 1077, April 1945.
- Lundquist, Eugene E.; Schuette, Evan H.; Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials 24S-T Aluminum-Alloy Sheet. ARR L5F01 (WR L-190), June 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials 17S-T Aluminum-Alloy Sheet. ARR L5F08 (WR L-20), June 1945.

- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 75S-T Aluminum Alloy. ARR L5F08a (WR L-173), July 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 24S-T Aluminum Alloy. ARR L5F08b (WR L-32), July 1945.
- Heimerl, George J. and Fay, Douglas P.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded R303-T Aluminum Alloy. ARR L5H04 (WR L-33), Oct. 1945.
- Leary, J. R. and Holt, Marshall: Column Strength of Extruded Magnesium Alloys AM-C58S and AM-C58S-T5. TN 994, Dec. 1945.
- Holt, Marshall and Leary, J. H.: The Column Strength of Aluminum Alloy 75 S-T Extruded Shapes. TN 1004, Jan. 1946.
- Heimerl, George J. and Niles, Donald E.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 14S-T Aluminum Alloy. ARR L6C19 (WR L-284), May 1946.
- Leary, J. R. and Holt, Marshall: Column Strength of Aluminum Alloy 14S-T Extruded Shapes and Rod. TN 1027, May 1946.
- Heimerl, George J. and Niles, Donald E .: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 0-1HTA Magnesium Alloy. TN 1156, Jan. 1947.
- Hu, Pai C. and McCulloch, James C.: The Local Buckling Strength of Lipped Z-Columns with Small Lip Width. TN 1335, June 1947.
- Goodman, Stanley and Boyd, Evelyn: Instability of Outstanding Flanges Simply Supported at One Edge and Reinforced by Bulbs at Other Edge. TN 1433, Dec. 1947.

Frames, Gridworks and Trusses

(4.2)

- Warner, Edward P. and Miller, Roy G.: Analysis of Fuselage Stresses. Rept. 76, 1920.
- Warner, E. P. and Miller, R. G.: Analysis of Wing Truss Stresses Including the Effect of Redundancies. Rept. 92, 1920.
- Miller, Roy G.: Torsion of Wing Trusses at Diving Speeds. Rept. 104, 1920.
- Burgess, C. P.: Bending Moments, Envelope, and Cable Stresses in Non-Rigid Airships. Rept. 115, 1921.
- Verduzio, Rodolfo: Metal Construction. TM 88, April 1922.
- Munk, Max M.: Stresses Produced on an Airship Flying Through Gusty Air. TN 111, Sept. 1922.
- Ballenstedt, L.: Influence of Ribs on Strength of Spars. TN 139, May 1923.
- Pagon, W. Watters: General Theory of Stresses in Rigid Airship, ZR-1. TN 140, May 1923.
- Blumenthal, O.: Calculations for a Single-Strut Biplane with Reference to the Tensions in the Wing Bracing. TN 143, June 1923.
- Kutzbach, K.: The Flexible Mounting of an Airplane Engine. TN 148, July 1923.
- Warner, Edward P.: The Effect of Bow Stiffeners in Non-Rigid Airships. TM 221, Aug. 1923.
- Anon.: Metal Airplane Construction. TM 361, May 1926.
- Guidoni, Alessandre: General Rules for Metal Aircraft Construction. TM 278, Sept. 1924.
- Younger, John E.: A Short Method of Calculating Torsional Stresses in an Airplane Fuselage. TN 203, Sept. 1924.
- Hall, Charles Ward: Structural Weight of Aircraft as Affected by the System of Design. TN 206, Nov. 1924.
- By Gentzcke of the S-L Airship Company: Structural Methods Employed by the Schutte-Lanz Airship Company. TM 313, May 1925.

- Thalau, K.: Computation of Cantilever Airplane Wings. TM 325, July 1925.
- Baumann, A.: Strength Calculations on Airplanes. TM 341, Dec. 1925.
- DeWoitine, M. E.: The Metal Construction of Airplanes - Its Advantages - Its Present State - Its Future. TM 349, Feb. 1926.
- Thalau, K.: Calculation of Combining Effects in the Structure of Airplane Wings. TM 366, June 1926.
- Dornier, C.: Recent Developments in the Construction and Operation of All-Metal Airplanes. TM 378, Sept. 1926.
- From "Zeitschrift fur Flugtechnik und Motorluftschiffahrt" July 14, 1926. Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt." TM 379, Sept. 1926.
- Rethel, W.: Structural Details from 1926 Paris Aero Salon. TM 405, March 1927.
- Gymnich, Alfried: Structural Details of German Gliders. TM 439, Dec. 1927.
- Kahn, L. L.: Stressed Coverings in Naval and Aeronautic Construction. TM 447, Jan. 1928.
- Anon.: (An Attempt at Standardization):
 Airplane Strength Calculations and
 Static Tests in Russia. TM 480,
 Sept. 1928.
- Anon.: Metal Aircraft Construction at Vickers - Some Interesting New Forms Developed. TM 440, Dec. 1927.
- Rohrbach, Adolf: Materials and Methods of Construction in Light Structures. TM 515, May 1929.
- Gabrielli, Giuseppe: Torsional Rigidity of Cantilever Wings with Constant Spar and Rib Sections. TM 520, July 1929.
- Wagner, Herbert: The Analysis of Aircraft Structures as Space Frameworks Method Based on the Forces in the Longitudinal Members. TM 522, July 1929.

- Kuchel, Ludwig: Autogenous Welding in Airplane Construction. TM 523, July 1929.
- Pollard, H. J.: Metal Construction Development. [- General Strip Metal Construction - Fuselage. TM 526, Aug. 1929.
- Pollard, H. J.: Metal Construction Development. II Strip Metal Construction-Wing Spars. TM 527, Aug. 1929.
- Pollard, H. J.: Metal Construction Development. III - Workshop Practice Strip Metal Construction - Wing Ribs. TM 528, Aug. 1929.
- Vogt, R.: Unsymmetrical Forces in an Airplane Cell. TM 539, Nov. 1929.
- Newlin, J. A. and Trayer, Geo. W.: The Design of Airplane Wing Ribs. Rept. 345, 1930.
- From Flight, April 18, 1930: "Gloster" Metal Construction. TM 570, June 1930.
- Schrenk, Martin: Structural Details of German Light Airplanes. TM 579, Aug. 1930.
- Teichmann, Alfred: Effects of the End Fixation of Airplane Struts. TM 582, Sept. 1930.
- Schwencke, D.: English Airplane Construction. TM 595, Dec. 1930.
- Trayer, George W. and March, H. W .: Elastic Instability of Members Having Sections Common in Aircraft Construction. Rept. 382, 1931.
- Swickard, Andrew E.: Metal-Truss Wing Spars. TN 383, July 1931.
- Teichmann, Alfred: Spatial Buckling of Various Types of Airplane Strut Systems. TM 647, Nov. 1931.
- Sänger, Eugen: Accurate Calculation of Multispar Cantilever and Semicantilever Wings with Parallel Webs Under Direct and Indirect Loading. TM 662, March 1932.
- Sanger, Eugen: Approximate Calculation of Multispar Cantilever and Semicantilever Wings with Parallel Ribs Under Direct and Indirect Loading. TM 680, Aug. 1932.
- Lundquist, Eugene E. and Burke, Walter F.: General Equations for the Stress Analysis of Rings. Rept. 509, 1934.

- Kuhn, Paul: Analysis of 2-Spar Cantilever Wings with Special Reference to Torsion and Load Transference. Rept. 508, 1935.
- Schwartz, A. Murray: Analysis of a Strut with a Single Elastic Support in the Span, with Applications to the Design of Airplane Jury-Strut Systems. I Derivation of Formulas. Bogert, Reid: II - Experimental Investigation of Formulas. TN 529, May 1935.
- James, Benjamin Wylie: Principal Effects of Axial Load on Moment-Distribution Analysis of Rigid Structures. TN 534, July 1935.
- Borkmann, K.: Charts for Checking the Stability of Compression Members in Trusses. TM 800, July 1936.
- Donely, Philip: The Forces and Moments on Airplane Engine Mounts. TN 587, Dec. 1936.
- Borkmann, K.: Charts for Checking the Stability of Plane Systems of Rods. TM 837, Sept. 1937.
- Lundquist, Eugene E.: Stability of Structural Members Under Axial Load. TN 617, Oct. 1937.
- Drescher, K. and Gropler, H.: Stresses in Reinforcing Rings due to Axial Forces in Cylindrical and Conical Stressed Skins. TM 847, Jan. 1938.
- Kuhn, Paul: Loads Imposed on Intermediate Frames of Stiffened Shells. TN 687, Feb. 1939.
- Reinitzhuber, F.: Stresses in Single-Spar Wing Constructions with Incompletely Built-Up Ribs. TM 937, March 1940.
- Weinhold, Josef: Buckling Tests with a Spar-Rib Grill. TM 950, Sept. 1940.
- Fahlbusch, H. and Wegner, W.: Stress Analysis of Circular Frames. TM 999, Dec. 1941.
- Stieda, W.: Statics of Circular-Ring Stiffeners for Monocoque Fuselages. TM 1004, Feb. 1942.
- Marguerre, K.: The Stresses in Stiffener Openings. TM 1005, Feb. 1942.
- Kuhn, Paul: The Influence of Bulkhead Spacing on Bending Stresses due to Torsion. ARR (WR L-501), May 1942.
- Lundquist, Eugene E. and Schwartz, Edward B.: A Study of General Instability of Box Beams with Truss-Type Ribs. TN 866, Nov. 1942.

- Niles, Alfred S. and Viscovich, Steven J.: Stability of Elastically Supported Columns. TN 871, Nov. 1942.
- Ruffner, Benjamin F.: Stress Analysis of Monocoque Fuselage Bulkheads by the Photoelastic Method. TN 870, Dec. 1942.
- Guggenheim Aeronautical Laboratory
 California Institute of Technology:
 Some Investigations of the General
 Instability of Stiffened Metal Cylinders.
 II Preliminary Tests of Wire-Braced
 Specimens and Theoretical Studies.
 TN 906, July 1943.
- Smull, Leland K.: An Investigation of the Validity of Wang's Formula for the Critical Load for Circular Cylindrical Grids. RB 3J28, Oct. 1943.
- Wignot, J. E.; Combs, Henry, and Ensrud, A. F.: Analysis of Circular Shell-Supported Frames. TN 929, May 1944.
- Ballhaus, W. F. and Niles, A. S.: Simplified Truss Stability Criteria. TN 937, July 1944.
- Lundquist, Eugene E.; Stowell, Elbridge Z. and Schuette, Evan H.: Principles of Moment Distribution Applied to Stability of Structures Composed of Bars or Plates. Rept. 809, 1945.
- Ochiltree, David W.: Comparison of Structural Efficiencies of Diagonal-Tension Webs and Truss Webs of 24S-T Aluminum Alloy. RB L5F25 (WR L-34), July 1945.

- Ruffner, B. F.: Stress Analysis of Columns and Beam Columns by the Photoelastic Method. TN 1002, March 1946.
- Hoff, N. J.; Libby, Paul A. and Klein, Bertram: Numerical Procedures for the Calculation of the Stresses in Monocoques. III - Calculation of the Bending Moments in Fuselage Frames. TN 998, April 1946.
- Hoff, N. J.; Klein, Bertram and Libby, Paul A.: Numerical Procedures for the Calculation of the Stresses in Monocoques. IV - Influence Coefficients of Curved Bars for Distortions in Their Own Plane. TN 999, April 1946.
- Gassner, E.: Strength Investigations in Aircraft Construction Under Repeated Application of the Load. TM 1087, Aug. 1946.
- Hoff, N. J.; Kase, Harry and Liebowitz, Harold: Interaction Between the Spars of Semimonocoque Wings with Cutouts. TN 1324, July 1947.
- Steinbacher, F. R. and Lo, Hsu: Determination of Bending Moments in Pressure-Loaded Rings of Arbitrary Shape when Deflections are Considered. TN 1692, Sept. 1948.
- Niles, Alfred S.: Overbalancing in Residual-Liquidation Computations. TN 1457, Feb. 1949.

Plates

(4.3)

- Wagner, Herbert: Structures of Thin Sheet Metal Their Design and Construction. TM 490, Dec. 1928.
- Wildhack, W. A. and Goerke, V. H.: The Limiting Useful Deflections of Corrugated Metal Diaphragms. TN 876, Dec. 1942.
- Tumarkin, S.: Methods of Stress Calculation in Rotating Disks. TM 1064, Sept. 1944.

FLAT

(4.3.1)

- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 14 on Aircraft Spot-Welding Research. An Investigation of the Effect of Spot Welding on the Sheet Efficiency of Aluminum Alloy 24S-T under Static Load. OCR 3J21, Oct. 1943.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 16 on Aircraft Spot-Welding Research. Further Investigation of the Effect of Spot Welds on the Sheet Efficiency of Alclad 24S-T. OCR 4J16, Feb. 1945.
- Moore, R. L. and Wescoat, C.: Bearing Strengths of 24S-T Aluminum Alloy Plate. TN 981, June 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 18 on Aircraft Spot-Welding Research. The Spot Welding of Ten Aluminum Alloys in the 0.040-Inch Gage. OCR 5C26, July 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 17 on Aircraft Spot-Welding Research. The Spot-Welding of Multiple Thicknesses of 0.040-Inch Alclad 24S-T. OCR 5G13, Sept. 1945.
- Ilyushin, A. A.: Stability of Plates and Shells Beyond the Proportional Limit. TM 1116, Oct. 1947.
- Ilyushin, A. A.: The Elasto-Plastic Stability of Plates. TM 1188, Dec. 1947.
- Heimerl, George J.: Determination of Plate Compressive Strengths. TN 1480, Dec. 1947.

- Wang, Chi-Teh: Nonlinear Large-Deflection Boundary-Value Problems of Rectangular Plates. TN 1425, March 1948.
- Wang, Chi-Teh: Bending of Rectangular Plates with Large Deflections. TN 1462, April 1948.
- Stowell, Elbridge Z.: A Unified Theory of Plastic Buckling of Columns and Plates. TN 1556, April 1948.
- Heimerl, George J.: Methods of Constructing Charts for Adjusting Test Results for the Compressive Strength of Plates for Differences in Material Properties. TN 1564, April 1948.
- Benscoter, Stanley U.: Shear Flows in Multicell Sandwich Sections. TN 1749, Nov. 1948.
- Budiansky, Bernard; Stein, Manuel and Gilbert, Arthur C.: Buckling of a Long Square Tube in Torsion and Compression. TN 1751, Nov. 1948.
- Heimerl, George J. and Roberts, William M.: Determination of Plate Compressive Strengths at Elevated Temperatures. TN 1806, Feb. 1949.
- Seide, Paul: Compressive Buckling of Flat Rectangular Metalite Type Sandwich Plates with Simply Supported Loaded Edges and Clamped Unloaded Edges. TN 1886, May 1949.

UNSTIFFENED (4.3.1.1)

- Joachim, W. F.: An Investigation of the Characteristics of Steel Diaphragms for Automatic Fuel-Injection Valves. TN 234, April 1926.
- Bollenrath, F.: Wrinkling Phenomena of Thin Flat Plates Subjected to Shear Stresses. TM 601, Jan. 1931.
- Seydel, Edgar: The Critical Shear Load of Rectangular Plates. TM 705, April 1933.
- Kuhn, Paul: A Summary of Design Formulas for Beams Having Thin Webs in Diagonal Tension. TN 469, Aug. 1933.

- Unstiffened Flat (Cont.)
- Heck, O. S. and Ebner, H.: Methods and Formulas for Calculating the Strength of Plate and Shell Constructions as used in Airplane Design. TM 785, Feb. 1936.
- Lahde, R. and Wagner, H.: Tests for the Determination of the Stress Condition in Tension Fields. TM 809, Nov. 1936.
- Lahde, R. and Wagner, H.: Experimental Studies of the Effective Width of Buckled Sheets. TM 814, Dec. 1936.
- Marguerre, Karl: The Apparent Width of the Plate in Compression. TM 833, July 1937.
- Kromm, A. and Marguerre, K.: Behavior of a Plate Strip Under Shear and Compressive Stresses Beyond the Buckling Limit. TM 870, July 1938.
- Lundquist, Eugene E.: Local Instability of Symmetrical Rectangular Tubes Under Axial Compression. TN 686, Feb. 1939.
- Lundquist, Eugene E.: Local Instability of Centrally Loaded Columns of Channel Section and Z-Section. TN 722, Aug. 1939.
- Hill, H. N.: Chart for Critical Compressive Stress of Flat Rectangular Plates. TN 773, Aug. 1940.
- Neubert, M. and Sommer, A.: Rectangular Shell Plating Under Uniformly Distributed Hydrostatic Pressure. TM 965, Dec. 1940.
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Critical Compressive Stress for Flat Rectangular Plates Supported Along all Edges and Elastically Restrained Against Rotation Along the Unloaded Edges. Rept. 733, 1942.
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Critical Compressive Stress for Outstanding Flanges. Rept. 734, 1942.
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Restraint Provided a Flat Rectangular Plate by a Sturdy Stiffener Along an Edge of the Plate. Rept. 735, 1942.
- Levy, Samuel: Bending of Rectangular Plates with Large Deflections. Rept. 737, 1942.
- Levy, Samuel: Square Plate with Clamped Edges Under Normal Pressure Producing Large Deflections. Rept. 740, 1942.
- Mc Pherson, Albert E.; Ramberg, Walter and Levy, Samuel: Normal-Pressure Tests of Circular Flates with Clamped Edges. Rept. 744, 1942.

- Ramberg, Walter; McPherson, Albert E. and Levy, Samuel: Normal-Pressure Tests of Rectangular Plates. Rept. 748, 1942.
- Levy, Samuel: Bending of Rectangular Plates with Large Deflections. TN 846, May 1942.
- Levy, Samuel: Square Plate with Clamped Edges Under Normal Pressure Producing Large Deflections. TN 847, May 1942.
- Ramberg, Walter; McPherson, Albert E. and Levy, Samuel: Normal-Pressure Tests of Rectangular Plates. TN 849, June 1942.
- Kuhn, Paul: The Strength and Stiffness of Shear Webs with and Without Lightening Holes. ARR (WR L-402), June 1942.
- Moore, R. L.: An Investigation of the Effectiveness of Stiffeners on Shear-Resistant Plate-Girder Webs. TN 862, Sept. 1942.
- Levy, Samuel and Greenman, Samuel: Bending with Large Deflection of a Clamped Rectangular Flate with Length-Width Ratio of 1.5 Under Normal Pressure. TN 853, July 1942.
- Dunn, Louis G.: On the Distribution of Stress in a Thin Plate Elastically Supported Along Two Edges at Loads Beyond the Stability Limit. TN 859, Oct. 1942.
- Levy, Samuel and Krupen, Philip: Large-Deflection Theory for End Compression of Long Rectangular Plates Rigidly Clamped Along Two Edges. TN 884, Jan. 1943.
- Hildebrand, Francis B. and Reissner, Eric: Least-Work Analysis of the Problem of Shear Lag in Box Beams. TN 893, May 1943.
- Lundquist, Eugene E. and Schuette, Evan H.: Critical Stresses for Plates. ARR 3J27 (WR L-466), Oct. 1943.
- Kroll, W. D.; Fisher, Gordon P. and Heimerl, George J.: Charts for Calculation of the Critical Stress for Local Instability of Columns with I-, Z-, Channel, and Rectangular-Tube Section. ARR 3K04 (WR L-429), Nov. 1943.
- Stowell, Elbridge Z.: Critical Shear Stress of an Infinitely Long Flat Plate with Equal Elastic Restraints Against Rotation Along the Parallel Edges. ARR 3K12 (WR L-476), Nov. 1943.

- Unstiffened Flat (Cont.)
- Stowell, Elbridge Z. and Schwartz, Edward B: Critical Stress for an Infinitely Long Flat Plate with Elastically Restrained Edges Under Combined Shear and Direct Stress. ARR 3K13 (WR L-340), Nov. 1943.
- Kroll, W. D.: Tables of Stiffness and Carry-Over Factor for Flat Rectangular Flates Under Compression. ARR 3K27 (WR L-398), Nov. 1943.
- Donnell, L. H.: The Stability of Isotropic or Orthotropic Cylinders or Flat or Curved Panels, Between and Across Stiffeners, with any Edge Conditions Between Hinged and Fixed, Under any Combination of Compression and Shear. TN 918, Dec. 1943.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strength of Extruded XB75S-T Aluminum Alloy. RB L4E26, May 1944.
- Head, Richard M. and Sechler, Ernest E.: Normal Pressure Tests on Unstiffened Flat Plates. TN 943, Sept. 1944.
- Roy, J. Albert and Schuette, Evan H.: The Effect of Angle of Bend Between Plate Elements on the Local Instability of Formed Z-Sections. RB L4I26 (WR L-268), Sept. 1944.
- Levy, Samuel; Goldenberg, Daniel and Zibritosky, George: Simply Supported Long Rectangular Plate Under Combined Axial Load and Normal Pressure. TN 949, Oct. 1944.
- Lundquist, Eugene E.; Stowell, Elbridge Z. and Schuette, Evan H.: Principles of Moment Distribution Applied to Stability of Structures Composed of Bars or Plates. Rept. 809, 1945.
- Levy, Samuel; Fienup, Kenneth L. and Woolley, Ruth M.: Analysis of Square Shear Web Above Buckling Load. TN 962, Feb. 1945.
- Lundquist, Eugene E.; Schuette, Evan H.; Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials 24S-T Aluminum-Alloy Sheet. ARR L5F01 (WR L-190), June 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials 17 S-T Aluminum-Alloy Sheet. ARR L5F08 (WR L-20), June 1945.

- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 75S-T Aluminum Alloy. ARR L5F08a (WR L-173), July 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 24S-T Aluminum Alloy. ARR L5F08b (WR L-32), July 1945.
- Ruffner, Benjamin F. and Schmidt, Calvin L.: Stresses at Cut-Outs in Shear Resistant Webs as Determined by the Photoelastic Method. TN 984, Oct. 1945.
- Heimerl, George J. and Fay, Douglas P.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded R303-T Aluminum Alloy. ARR L5H04 (WR L-33), Oct. 1945.
- Peterson, James P.: Strain Measurements and Strength Tests of 25-Inch Diagonal-Tension Beams with Single Uprights. ARR L5J02a (WR L-104), Nov. 1945.
- Batdorf, S. B. and Houbolt, John C.: Critical Combinations of Shear and Transverse Direct Stress for an Infinitely Long Flat Plate with Edges Elastically Restrained Against Rotation. Rept. 847, 1946.
- Budiansky, Bernard and Hu, Pai C.: The Lagrangian Multiplier Method of Finding Upper and Lower Limits to Critical Stresses of Clamped Plates. Rept. 848, 1946.
- Levy, Samuel; Woolley, Ruth M. and Corrick, Josephine N.: Analysis of Deep Rectangular Shear Web Above Buckling Load. TN 1009, March 1946.
- Libove, Charles and Stein, Manuel: Charts for Critical Combinations of Longitudinal and Transverse Direct Stress for Flat Rectangular Plates. ARR L6A05 (WR L-224), March 1946.
- Batdorf, S. B.; Stein, Manuel and Libove, Charles: Critical Combinations of Longitudinal and Transverse Direct Stress for an Infinitely Long Flat Plate with Edges Elastically Restrained Against Rotation. ARR L6A05a (WR L-49), March 1946.
- Heimerl, George J. and Niles, Donald E.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 14S-T Aluminum Alloy. ARR L6C19 (WR L-284), May 1946.

- Unstiffened Flat (Cont.)
- Woolley, Ruth M.; Corrick, Josephine N. and Levy, Samuel: Clamped Long Rectangular Plate Under Combined Axial Load and Normal Pressure. TN 1047, June 1946.
- Hu, Pai C.; Lundquist, Eugene E. and Batdorf, S. B.: Effect of Small Deviations from Flatness on Effective Width and Buckling of Plates in Compression. TN 1124, Sept. 1946.
- Levin, L. Ross and Nelson, David H.: Effect of Rivet or Bolt Holes on the Ultimate Strength Developed by 24S-T and Alclad 75S-T Sheet in Incomplete Diagonal Tension. TN 1177, Jan. 1947.
- Stein, Manuel and Neff, John: Buckling Stresses of Simply Supported Rectangular Flat Plates in Shear. TN 1222, March 1947.
- Batdorf, S. B. and Stein, Manuel: Critical Combinations of Shear and Direct Stress for Simply Supported Rectangular Flat Plates. TN 1223, March 1947.
- Norris, Charles B.: An Analysis of the Compressive Strength of Honeycomb Cores for Sandwich Constructions. TN 1251, April 1947.
- Schuette, Evan H. and McCulloch, James C.: Charts for the Minimum-Weight Design of Multiweb Wings in Bending. TN 1323, June 1947.
- Libove, Charles; Ferdman, Saul and Reusch, John J.: Elastic Buckling of a Simply Supported Plate Under a Compressive Stress that Varies Linearly in the Direction of Loading. TN 1891, June 1949.
- Seide, Paul: Shear Buckling of Infinitely Long Simply Supported Metalite Type Sandwich Plates. TN 1910, July 1949.

STIFFENED (4.3.1.2)

- Schuman, Louis and Back, Goldie: Strength of Rectangular Flat Plates Under Edge Compression. Rept. 356, 1930.
- Seydel, Edgar: Wrinkling of Reinforced Plates Subjected to Shear Stresses. TM 602, Jan. 1931.
- Lundquist, Eugene E.: Comparison of Three Methods for Calculating the Compressive Strength of Flat and Slightly Curved Sheet and Stiffener Combinations. TN 455, March 1933.

- Schüssler, Karl: The Behavior Under Shearing Stress of Duralumin Strip with Round, Flanged Holes. TM 756, Oct. 1934.
- Heck, O. S. and Ebner, H.: Methods and Formulas for Calculating the Strength of Plate and Shell Constructions as Used in Airplane Design. TM 785, Feb. 1936.
- Kuhn, Paul: Stress Analysis of Beams with Shear Deformation of the Flanges. Rept. 608, 1937.
- Kuhn, Paul: Approximate Stress Analysis of Multi-Stringer Beams with Shear Deformation of the Flanges. Rept. 636, 1938.
- Ramberg, Walter; Mc Pherson, Albert E. and Levy, Sam: Experimental Study of Deformation and of Effective Width in Axially Loaded Sheet-Stringer Panels. TN 684, Feb. 1939.
- Barbré, R.: Stability of Rectangular Plates with Longitudinal or Transverse Stiffeners under Uniform Compression. TM 904, Aug. 1939.
- Kuhn, Paul: A Recurrence Formula for Shear-Lag Problems. TN 739, Dec. 1939.
- Dumont, C.: Stress Concentration Around an Open Circular Hole in a Plate Subjected to Bending Normal to the Plane of the Plate. TN 740, Dec. 1939.
- Dunn, Louis G.: An Investigation of Sheet-Stiffener Panels Subjected to Compression Loads with Particular Reference to Torsionally Weak Stiffeners. TN 752, Feb. 1940.
- Holt, Marshall: The Effect of Methods of Testing on the Ultimate Loads Supported by Stiffened Flat Sheet Panels Under Edge Compression. TN 811, June 1941.
- Kuhn, Paul: Ultimate Stresses Developed by 24S-T Sheet in Incomplete Diagonal Tension. TN 833, Dec. 1941.
- Kuhn, Paul: Skin Stresses Around Inspection Cut-Outs. ARR, Dec. 1941.
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Critical Compressive Stress for Flat Rectangular Plates Supported Along all Edges and Elastically Restrained Against Rotation Along the Unloaded Edges. Rept. 733, 1942.
- Kuhn, Paul and Chiarito, Patrick T.: Shear Lag in Box Beams Methods of Analysis and Experimental Investigations. Rept. 739, 1942.

- Stiffened Flat (Cont.)
- Erlandsen, Oscar, Jr. and Mead, Lawrence M., Jr.: A Method of Shear-Lag Analysis of Box Beams for Axial Stresses, Shear Stresses, and Shear Center. ARR (WR W-33), April 1942.
- Kuhn, Paul and Moggio, Edwin M.: Stresses Around Rectangular Cut-Outs in Skin-Stringer Panels Under Axial Loads. ARR (WR L-399), June 1942.
- Kuhn, Paul: The Strength and Stiffness of Shear Webs with and Without Lightening Holes. ARR (WR L-402), June 1942.
- Levy, Samuel; McPherson, Albert E. and Ramberg, Walter: Effect of Rivet and Spot-Weld Spacing on the Strength of Axially Loaded Sheet-Stringer Panels of 24S-T Aluminum Alloy. TN 856, Aug. 1942.
- Lundquist, Eugene E.; Kotanchik, Joseph N. and Zender, George W.: A Study of the Compressive Strength of Stiffened Plywood Panels. RB, Aug. 1942.
- Moore, R. L.: An Investigation of the Effectiveness of Stiffeners on Shear-Resistant Plate-Girder Webs. TN 862, Sept. 1942.
- Rossman, Carl A. and Schuette, Evan H.: Data on Compressive Strength of Flat Panels with Z-Section Stiffeners. RB, Sept. 1942.
- Chiarito, Patrick T.: Shear-Lag Tests of Two Box Beams with Flat Covers Loaded to Destruction. ARR (WR L-307), Oct. 1942.
- Lundquist, Eugene E. and Schwartz, Edward B.: A Study of General Instability of Box Beams with Truss-Type Ribs. TN 866, Nov. 1942.
- Kuhn, Paul: The Strength and Stiffness of Shear Webs with Round Lightening Holes Having 45° Flanges. ARR (WR L-323), Dec. 1942.
- Kuhn, Paul: A Procedure for the Shear-Lag Analysis of Box Beams. ARR (WR L-401), Jan. 1943.
- Niles, Alfred S.: Tests of Flat Panels with Four Types of Stiffeners. TN 882, Jan. 1943.
- Holt, Marshall: Tests of Aluminum-Alloy Stiffened-Sheet Specimens Cut from an Airplane Wing. TN 883, Jan. 1943.
- Hildebrand, Francis B.: The Exact Solution of Shear-Lag Problems in Flat Panels and Box Beams Assumed Rigid in the Transverse Direction. TN 894, June 1943.

- Kuhn, Paul and Levin, L. Ross: Tests of 10-Inch 24S-T Aluminum-Alloy Shear Panels with 1-1/2-Inch Holes. RB 3F29 (WR L-500), June 1943.
- Kuhn, Paul; Duberg, John E. and Diskin, Simon H.: Stresses Around Rectangular Cut-Outs in Skin-Stringer Panels Under Axial Loads - II. ARR 3J02 (WR L-368), Oct. 1943.
- Donnell, L. H.: The Stability of Isotropic or Orthotropic Cylinders or Flat or Curved Panels, Between and Across Stiffeners, with any Edge Conditions Between Hinged and Fixed, Under any Combination of Expression and Shear. TN 918, Dec. 1943.
- Scott, Merit and Weber, Robert L.: Requirements for Auxiliary Stiffeners
 Attached to Panels Under Combined
 Compression and Shear. TN 921, Dec.
 1943.
- Weinberger, Robert A.; Sperry, William C. and Dobrowski, Charles V.: Compressive Strength of Corrugated-Sheet-Stiffened Panels for Consolidated XB-36 Airplane. MR (WR L-588), Jan. 1944.
- Chiarito, Patrick T.: Shear-Lag Tests of Two Box Beams with Corrugated Covers Loaded to Failure. ARR 4A05 (WR L-482), Jan. 1944.
- Duberg, John E.: Comparison of an Approximate and an Exact Method of Shear-Lag Analysis. ARR 4A18 (WR L-310), Jan. 1944.
- Rossman, Carl A.; Bartone, Leonard M. and Cobrowski, Charles V.: Compressive Strength of Flat Panels with Z-Section Stiffeners. ARR 4B03 (WR L-499), Feb. 1944.
- Weinberger, Robert A.; Rossman, Carl A. and Fisher, Gordon P.: Comparison of the Compressive Strength of Panels with Alclad 24S-T81 Sheet or with Alclad 24S-T86 Sheet Riveted to Alclad 24S-T84 Hat-Section Stiffeners. MR (WR L-587), April 1944.
- Kuhn, Paul and Levin, L. Ross: Tests of 10-Inch 24S-T Aluminum Alloy Shear Panels with 1-1/2-Inch Holes. II -Panels Having Holes with Notched Edges. RB L4D01 (WR L-512), April 1944.
- Moggio, Edwin M. and Brilmyer, Harold G.: A Method for Estimation of Maximum Stresses Around a Small Rectangular Cut-Out in a Sheet-Stringer Panel in Shear. ARR L4D27 (WR L-64), April 1944.

- Stiffened Flat (Cont.)
- Kotanchik, Joseph N.; Weinberger, Robert A.; Zender, George W. and Neff, John, Jr.: Compressive Strength of Flat Panels with Z- and Hat-Section Stiffeners. ARR L4F01 (WR L-62), June 1944.
- Hoff, N. J.; Levy, Robert S. and Kempner, Joseph K.: Numerical Procedures for the Calculation of the Stresses in Monocoques. I - Diffusion of Tensile Stringer Loads in Reinforced Panels. TN 934, June 1944.
- Ramberg, Walter; Levy, Samuel and Fienup, Kenneth L.: Effect of Curvature on Strength of Axially Loaded Sheet-Stringer Panels. TN 944, Aug. 1944.
- Boughan, Rolla B. and Baab, George W.: Charts for Calculation of the Critical Compressive Stress for Local Instability of Idealized Web- and T-Stiffened Panels. ARR L4H29 (WR L-204), Aug. 1944.
- Hoff, N. J. and Kempner, Joseph: Numerical Procedures for the Calculation of the Stresses in Monocoques. II Diffusion of Tensile Stringer Loads in Reinforced Flat Panels with Cut-Outs. TN 950, Nov. 1944.
- Dow, Norris F. and Hickman, William A.:
 Preliminary Investigation of the Relation of the Compressive Strength of Sheet-Stiffener Panels to the Diameter of Rivet used for Attaching Stiffeners to Sheet. RB L4I13 (WR L-61), Nov. 1944.
- Zender, George W.; Schuette, Evan H. and Weinberger, Robert A.: Data on Material Properties and Panel Compressive Strength of a Plastic-Bonded Material of Glass Cloth and Canvas. TN 975, Dec. 1944.
- Schuette, Evan H.: Charts for the Minimum-Weight Design of 24S-T Alluminum-Alloy Flat Compression Panels with Longitudinal Z-Section Stiffeners. Rept. 827, 1945.
- Chiarito, Patrick T. and Diskin, Simon H.: Strain Measurements and Strength Tests on the Tension Side of a Box Beam with Flat Cover. ARR L5A13b (WR L-59), Feb. 1945.
- Kuhn, Paul and Diskin, Simon H.: On the Shear Strength of Skin-Stiffener Panels with Inspection Cut-Outs. ARR L5C01a (WR L-192), March 1945.
- Kempner, Joseph: Application of a Numerical Procedure to Stress Analysis of Stringer-Reinforced Panels. ARR L5C09a (WR L-11), March 1945.

- Kennedy, W. B., Jr. and Troxell, W. W.: Study of Compression Panel, Supported on Four Edges, Formed of Corrugated Sheet with Flat Skin on Both Sides. ARR 5B03, June 1945.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. I Panels with Close Stiffener Spacing that Fail by Local
 Buckling. RB L5G03 (WR L-44),
 Aug. 1945.
- McPherson, A. E.; Levy, Samuel and Zibritosky, George: Effect of Normal Pressure on Strength of Axially Loaded Sheet-Stringer Panels. TN 1041, July 1946.
- Podorozhny, A. A.: Investigation of the Behavior of Thin-Walled Panels with Cutouts. TM 1094, Sept. 1946.
- Schuette, Evan H.; Barab, Saul and Mc-Cracken, Howard L.: Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners. TN 1157, Dec. 1946.
- Kuhn, Paul; Rafel, Norman and Griffith, George E.: Stresses Around Rectangular Cut-Outs with Reinforced Coaming Stringers. TN 1176, Jan. 1947.
- Holt, Marshall and Feil, G. W.: Comparative Tests on Extruded 14S-T and Extruded 24S-T Hat-Shape Stiffener Sections. TN 1172, March 1947.
- Farb, Daniel: Experimental Investigation of the Stress Distribution Around Reinforced Circular Cut-Outs in Skin-Stringer Panels Under Axial Loads. TN 1241, March 1947.
- Dow, Norris F.; Hickman, William A. and McCracken, Howard L.: Compressive-Strength Comparisons of Panels Having Aluminum-Alloy Sheet and Stiffeners with Panels Having Magnesium-Alloy Sheet and Aluminum-Alloy Stiffeners. TN 1274, April 1947.
- Dow, Norris F. and Hickman, William A.:
 Design Charts for Flat Compression
 Panels Having Longitudinal Extruded
 Y-Section Stiffeners and Comparison
 with Panels Having Formed Z-Section
 Stiffeners. TN 1389, Aug. 1947.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Ribets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. Panels of Various Lengths
 with Close Stiffener Spacing. TN 1421,
 Sept. 1947.

Stiffened - Flat (Cont.)

- Hickman, William A. and Dow, Norris F.:
 Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners Having a Ratio of Stiffener Thickness to Skin Thickness Equal to 1.00. TN 1439, Sept. 1947.
- Goodman, Stanley and Boyd, Evelyn: Instability of Outstanding Flanges Simply Supported at One Edge and Reinforced by Bulbs at Other Edge. TN 1433, Dec. 1947.

CURVED

(4.3.2)

UNSTIFFENED (4.3.2.1)

- Smith, George Michael: Strength in Shear of Thin Curved Sheets of Alclad. TN 343, June 1930.
- Kromm, A.: The Limit of Stability of a Curved Plate Strip Under Shear and Axial Stresses. TM 898, June 1939.
- Roark, Raymond J.: Stresses and Deflections in Thin Shells and Curved Plated Due to Concentrated and Variously Distributed Loading. TN 806, May 1941.
- Levy, Samuel: Large-Deflection Theory of Curved Sheet. TN 895, May 1943.
- Crate, Harold and Levin, L. Ross: Data on Buckling Strength of Curved Sheet in Compression. ARR 3J04 (WR L-557), Oct. 1943.
- Donnell, L. H.: The Stability of Isotropic or Orthotropic Cylinders or Flat or Curved Panels, Between and Across Stiffeners, with Any Edge Conditions Between Hinged and Fixed, Under Any Combination of Expression and Shear. TN 918, Dec. 1943.
- Stowell, Elbridge Z.: Critical Compressive Stress for Curved Sheet Supported Along All Edges and Elastically Restrained Against Rotation Along the Unloaded Edges. RB 3107 (WR L-253), Oct. 1946.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Shear Stress of Curved Rectangular Panels. TN 1348, May 1947.
- Batdorf, S. B.: A Simplified Method of Elastic-Stability Analysis for Thin Cylindrical Shells. II - Modified Equilibrium Equation. TN 1342, June 1947.

- Batdorf, S. B.; Schildcrout, Murry and Stein, Manuel: Critical Shear Stress of Long Plates with Transverse Curvature. TN 1346, June 1947.
- Batdorf, S. B.; Schildcrout, Murry and Stein, Manuel: Critical Combinations of Shear and Longitudinal Direct Stress for Long Plates with Transverse Curvature. TN 1347, June 1947.

STIFFENED (4.3.2.2)

- Lundquist, Eugene E.: Comparison of Three Methods for Calculating the Compressive Strength of Flat and Slightly Curved Sheet and Stiffener Combinations. TN 455, March 1933.
- Limpert, G.: The Buckling of Curved Tension-Field Girders. TM 846, Jan. 1938.
- Wenzek, W. A.: The Effective Width of Curved Sheet After Buckling. TM 880, Nov. 1938.
- Lundquist, Eugene E.: Preliminary Data on Buckling Strength of Curved Sheet Panels in Compression. ARR (WR L-690), Nov. 1941.
- Rafel, Norman: Effect of Normal Pressure on the Critical Compressive Stress of Curved Sheet. RB (WR L-258), Nov. 1942.
- Jacobs, Eastman N.; Lundquist, Eugene E.; Davidson, Milton and Houbolt, John C.: A Preliminary Study of the Effect of Compressive Load on the Fairness of a Low-Drag Wing Specimen with Z-Section Stiffeners. CB (WR L-527), Jan. 1943.
- Rafel, Norman: Effect of Normal Pressure on the Critical Shear Stress of Curved Sheet. RB (WR L-416), Jan. 1943.
- Holt, Marshall: Tests of Aluminum-Alloy Stiffened-Sheet Specimens Cut from an Airplane Wing. TN 883, Jan. 1943.
- Donnell, L. H.: The Stability of Isotropic or Orthotropic Cylinders or Flat or Curved Panels, Between and Across Stiffeners, with Any Edge Conditions Between Hinged and Fixed, Under Any Combination of Expression and Shear. TN 918, Dec. 1943.
- Davidson, Milton; Houbolt, John C.; Rafel, Norman and Rossman, Carl A.: Preliminary Aerodynamic and Structural Tests Showing the Effect of Compressive Load on the Fairness of a Low-Drag Wing Specimen with Chordwise Hat-Section Stiffeners. ACR 3L02 (WR L-389), Dec. 1943.

- Stiffened Curved (Cont.)
- Chiarito, Patrick T.: Some Strength Tests of Stiffened Curved Sheets Loaded in Shear. RB L4D29 (WR L-259), April 1944.
- Hoff, N. J.; Levy, Robert S. and Kempner, Joseph K.: Numerical Procedures for the Calculation of the Stresses in Monocoques. I - Diffusion of Tensile Stringer Loads in Reinforced Panels. TN 934, June 1944.
- Ramberg, Walter; Levy, Samuel and Fienup, Kenneth L.: Effect of Curvature on Strength of Axially Loaded Sheet-Stringer Panels. TN 944, Aug. 1944.
- Schuette, Evan H.; Rafel, Norman and Dobrowski, Charles V.: Compression Tests of Six Curved Paper-Base Plastic Panels with Outward-Acting Normal Pressure. MR (WR L-280), Sept. 1944.
- McPherson, Albert E.; Fienup, Kenneth L. and Zibritosky, George: Effect of Developed Width on Strength of Axially Loaded Curved Sheet Stringer Panels. ARR 4H08 (WR W-51), Nov. 1944.
- Kuhn, Paul and Levin, L. Ross: An Empirical Formula for the Critical Shear Stress of Curved Sheets. ARR L5A05 (WR L-58), Jan. 1945.
- Rafel, Norman and Sandlin, Charles W., Jr.: Effect of Normal Pressure on the Critical Compressive and Shear Stress of Curved Sheet. ARR L5B10 (WR L-57), March 1945.

- Pian, Theodore Hsueh-Huang: Analytical Study of Transmission of Load from Skin to Stiffeners and Rings of Pressurized Cabin Structure. TN 993, Oct. 1945.
- Hoff, N. J. and Boley, Bruno A.: The Shearing Rigidity of Curved Panels Under Compression. TN 1090, Aug. 1946.
- Kuhn, Paul and Griffith, George E.: Diagonal Tension in Curved Webs. TN 1481, Nov. 1947.
- Sandlin, Charles W., Jr.: Strength Tests of Shear Webs with Uprights Not Connected to the Flanges. TN 1635, June 1948.
- Batdorf, S. B. and Schildcrout, Murry: Critical Axial-Compressive Stress of a Curved Rectangular Panel with a Central Chordwise Stiffener. TN 1661, July 1948.
- Hoff, N. J.; Boley, Bruno A. and Nardo, S. V.: The Inward Bulge Type Buckling of Monocoque Cylinders. IV Experimental Investigation of Cylinders Subjected to Pure Bending. TN 1499, Sept. 1948.
- Schildcrout, Murry and Stein, Manuel:
 Critical Axial-Compressive Stress of
 a Curved Rectangular Panel with a
 Central Longitudinal Stiffener. TN
 1879, May 1949.
- Schildcrout, Murry and Stein, Manuel: Critical Combinations of Shear and Direct Axial Stress for Curved Rectangular Panels. TN 1928, Aug. 1949.

Beams

(4.4)

- Nelson, John H.: The Strength of One-Piece Solid, Built-Up, and Laminated Wood Airplane Wing Beams. Rept. 35, 1919.
- Ratzersdorfer, Julius: Calculation of Wing Spars. TM 34, Aug. 1921.
- Muller-Breslau, H.: Calculation of Wing Spars. TM 35, Aug. 1921.
- Verduzio, Rodolfo: Metal Construction. TM 88, April 1922.
- Sonntag, R.: Best Rectangular and I-Shaped Cross-Sections for Airplane Wing Spars. TM 148, Oct. 1922.
- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength. I Deflection of Beams with Special Reference to Shear Deformations. Rept. 180, 1924.
- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength. II - Form Factors of Beams Subjected to Transverse Loading Only. Rept. 181, 1924.
- Warner, Edward P.: Wing Spar Stress Charts and Wing Truss Proportions. Rept. 214, 1925.
- Kirste, Leon: Calculation of Wing Spars of Variable Cross-Section and Linear Load. TM 305, March 1925.
- Thalau, K.: Computation of Cantilever Airplane Wings. TM 325, July 1925.
- DeWoitine, M. E.: The Metal Construction of Airplanes Its Advantages Its Present State Its Future. TM 349, Feb. 1926.
- Bromley, Stevens and Robinson, William H., Jr.: The Lateral Failure of Spars. TN 232, March 1926.
- Blyth, J. D.: Spindled and Hollow Spars. TM 383, Oct. 1926.
- Martin, Brian L.: Steel Spars. TM 458, April 1928.
- Wagner, Herbert: Structures of Thin Sheet Metal, Their Design and Construction. TM 490, Dec. 1928.

- Burgess, C. P.: The Torsional Strength of Wings. Rept. 329, 1929.
- Tellers, H.: Effect of Stressed Covering on Strength of Internal Girders of a Wing. TM 503, March 1929.
- Gabrielli, Giuseppe: Torsional Rigidity of Cantilever Wings with Constant Spar and Rib Sections. TM 520, July 1929.
- Pollard, H. J.: Metal Construction Development. Part IV Moments of Inertia of Thin Corrugated Sections. TM 529, Sept. 1929.
- Stieger, H. J.: Cantilever Wings for Modern Aircraft. Some Aspects of Cantilever Wing Construction with Special Reference to Weight and Torsional Stiffness. TM 538, Nov. 1929.
- Trayer, George W. and March, H. W.: The Torsion of Members Having Sections Common in Aircraft Construction. Rept. 334, 1930.
- Newlin, J. A. and Trayer, Geo. W.: A Method of Calculating the Ultimate Strength of Continuous Beams. Rept. 347, 1930.
- Mathar, J.: Metal Covering of Airplanes. TM 592, Nov. 1930.
- Trayer, George W. and March, H. W.: Elastic Instability of Members Having Sections Common in Aircraft Construction. Rept. 382, 1931.
- Wagner, Herbert: Flat Sheet Metal Girder with Very Thin Metal Web. I - General Theories and Assumptions. TM 604, Feb. 1931.
- Wagner, Herbert: Flat Sheet Metal Girders with Very Thin Metal Web. II - Sheet Metal Girders with Spars Resistant to Bending - Oblique Uprights - Stiffness. TM 605 Feb. 1931.
- Wagner, Herbert: Flat Sheet Metal Girders with Very Thin Metal Web. III - Sheet Metal Girders with Spars Resistant to Bending the Stress in Uprights - Diagonal Tension Fields. TM 606, Feb. 1931.
- Hartmann, E. C.: Comparison of Weights of 17ST and Steel Tubular Structural Members Used in Aircraft Construction. TN 378, May 1931.

- Sänger, Eugen: Accurate Calculation of Multispar Cantilever and Semicantilever Wings with Parallel Webs Under Direct and Indirect Loading. TM 662, March 1932.
- Sänger, Eugen: Approximate Calculation of Multispar Cantilever and Semicantilever Wings with Parallel Ribs Under Direct and Indirect Loading. TM 680, Aug. 1932.
- Hertel, Heinrich: Dynamic Breaking Tests of Airplane Parts. TM 698, Jan. 1933.
- Kuhn, Paul: A Summary of Design Formulas for Beams Having Thin Webs in Diagonal Tension. TN 469, Aug. 1933.
- Kuhn, Paul: Analysis of 2-Spar Centilever Wings with Special Reference to Torsion and Load Transference. Rept. 508, 1935.
- Cicala, Placido: The Bending of Beams with Thin Tension Flanges. TM 769, March 1935.
- Huber, Maximilian T.: Bending of Beams of Thin Sections. TM 793, April 1936.
- Lahde, R. and Wagner, H.: Tests for the Determination of the Stress Condition in Tension Fields. TM 809, Nov. 1936.
- Dumont, C. and Hill, H. N.: The Lateral Instability of Deep Rectangular Beams. TN 601, May 1937.
- Schapitz, E.: Contributions to the Theory of Incomplete Tension Bay. TM 831, July 1937.
- Kuhn, Paul: Loads Imposed in Intermediate Frames of Stiffened Shells. TN 687, Feb. 1939.
- Kuhn, Paul: Investigations on the Incompletely Developed Plane Diagonal-Tension Field. Rept. 697, 1940.
- Dumont, C. and Hill, H. N.: The Lateral Stability of Equal-Flanged Aluminum Alloy. I - Beams Subjected to Pure Bending. TN 770, Aug. 1940.
- Winter, George: Stress Distribution in and Equivalent Width of Flanges of Wide, Thin-Wall Steel Beams. TN 784, Nov. 1940.
- Kuhn, Paul and Chiarito, Patrick T.: The Strength of Plan Web Systems in Incomplete Diagonal Tension. ARR (WR L-367), Aug. 1942.
- Moore, R. L. and Holt, Marshall: Beam and Torsion Tests of Aluminum-Alloy 61S-T Tubing. TN 867, Oct. 1942.

- Hill, H. N.: Torsion of Flanged Members with Cross Sections Restrained Against Warping. TN 888, March 1943.
- Leving, L. Ross: Tests of Beams Having Webs with Large Circular Lightening Holes. RB 4B23 (WR L-524), Feb. 1944.
- Niles, Alfred S.: Elastic Properties of Channels with Unflanged Lightening Holes. TN 924, March 1944.
- Stowell, Elbridge Z.; Schwartz, Edward B.; Houbolt, John C. and Schmieder, Albert K.: Bending and Shear Stresses Developed by the Instantaneous Arrest of the Root of a Cantilever Beam with a Mass at Its Tip. MR L4K30 (WR L-586), Nov. 1944.
- Stowell, Elbridge Z.; Schwartz, Edward B. and Houbolt, John C.: Bending and Shear Stresses Developed by the Instantaneous Arrest of the Root of a Moving Cantilever Beam. Rept. 828, 1945.
- Levy, Samuel; Fienup, Kenneth L. and Woolley, Ruth M.: Analysis of Square Shear Web Above Buckling Load. TN 962, Feb. 1945.
- Stowell, Elbridge Z.; Schwartz, Edward B. and Houbolt, John C.: Bending and Shear Stresses Developed by the Instantaneous Arrest of the Root of a Cantilever Beam Rotating with Constant Angular Velocity About a Transverse Axis Through the Root. ARR L5E25 (WR L-27), June 1945.
- Ochiltree, David W.: Comparison of Structural Efficiencies of Diagonal-Tension Webs and Truss Webs of 24S-T Aluminum Alloy. RB L5F25 (WR L-34), July 1945.
- Ruffner, Benjamin F. and Schmidt, Calvin L.: Stresses at Cut-Outs in Shear Resistant Webs as Determined by the Photoelastic Method. TN 984, Oct. 1945.
- Peterson, James P.: Strain Measurements and Strength Tests of 25-Inch Diagonal-Tension Beams with Single Uprights. ARR L5J02a (WR L-104), Nov. 1945.
- Levy, Samuel; Woolley, Ruth M. and Corrick, Josephine N.: Analysis of Deep Rectangular Shear Web Above Buckling Load. TN 1009, March 1946.
- Hoff, N. J.; Libby, Paul A. and Klein, Bertram: Numerical Procedures for the Calculation of the Stresses in Monocoques. III - Calculation of the Bending Moments in Fuselage Frames. TN 998, April 1946.

- Hoff, N. J.; Klein, Bertram and Libby, Paul A.: Numerical Procedures for the Calculation of the Stresses in Monocoques. IV - Influence Coefficients of Curved Bars for Distortions in Their Own Plane. TN 999, April 1946.
- Peterson, James P.: Strain Measurements and Strength Tests of 25-Inch Diagonal-Tension Beams of 75S-T Aluminum Alloy. TN 1058, May 1946.
- Levin, L. Ross and Nelson, David H.: Comparison of Measured and Calculated Stresses in Built-Up Beams. TN 1063, May 1946.
- Podorozhny, A. A.: Investigation of the Behavior of Thin-Walled Panels with Cutouts. TM 1094, Sept. 1946.
- Hu, Pai C.; Lundquist, Eugene E. and Batdorf, S. B.: Effect of Small Deviations from Flatness on Effective Width and Buckling of Plates in Compression. TN 1124, Sept. 1946.
- Kuhn, Paul and Peterson, James P.: Strength Analysis of Stiffened Beam Webs. TN 1364, July 1947.
- Marguerre, Karl: On the Application of the Energy Method to Stability Problems. TM 1138, Oct. 1947.
- Anderson, Roger A.: Determination of Coupled Modes and Frequencies of Swept Wings by Use of Power Series. RM L7H28, Oct. 1947.
- Houbolt, John C. and Anderson, Roger A.: Calculation of Uncoupled Modes and Frequencies in Bending or Torsion of Nonuniform Beams. TN 1522, Feb. 1948.
- Smith, C. B. and Voss, A. W.: Stress Distribution in a Beam of Orthotropic Material Subjected to a Concentrated Load. TN 1486, March 1948.
- Budiansky, Bernard; Connor, Robert W. and Stein, Manuel: Buckling in Shear of Continuous Flat Plates. TN 1565, April 1948.
- Stowell, Elbridge Z.; Houbolt, John C. and Batdorf, S. B.: An Evaluation of Some Approximate Methods of Computing Landing Stresses in Aircraft. TN 1584, May 1948.
- Anderson, Roger A. and Houbolt, John C.:
 Determination of Coupled and Uncoupled
 Modes and Frequencies of Natural
 Vibration of Swept and Unswept Wings
 from Uniform Cantilever Modes. TN
 1747, Nov. 1948.

- Benscoter, Stanley U. and Gossard, Myron L.: Matrix Methods for Calculating Cantilever-Beam Deflections. TN 1827, March 1949.
- Vlasov, V. S.: Some New Problems on Shells and Thin Structures. TM 1204, March 1949.
- Stein, Manuel and Fralich, Robert W.: Critical Shear Stress of Infinitely Long, Simply Supported Plate with Transverse Stiffeners. TN 1851, April 1949.
- Kruszewski, Edwin T.: Effect of Transverse Shear and Rotary Inertia on the Natural Frequency of a Uniform Beam. TN 1909, July 1949.

BOX

(4.4.1)

- Thalau, K.: Calculation of Combining Effects in the Structure of Airplane Wings. TM 366, June 1926.
- Haddon, J. D.: Metal Spars. TM 368, June 1926.
- Martin, Brian L.: Steel Spars. TM 458, April 1928.
- Mathar, J.: On the Strength of Box Type Fuselages. TM 511, May 1929.
- Pollard, H. J.: Metal Construction Development. Part II Strip Metal Construction Wing Spars. TM 527, Aug. 1929.
- Trayer, George W.: The Design of Plywood Webs for Airplane Wing Beams. Rept. 344, 1930.
- Von Baranoff, A.: Determination of the Best Cross Section for a Box Beam Subjected to Bending Stresses. TM 577, Aug. 1930.
- Wheatley, John B.: Torsion in Box Wings. TN 366, Feb. 1931.
- Ebner, Hans: Torsional Stresses in Box Beams with Cross Sections Partially Restrained Against Warping. TM 744, May 1934.
- Kuhn, Paul: The Torsional Stiffness of Thin Duralumin Shells Subjected to Large Torques. TN 500, July 1934.
- Kuhn, Paul: Bending Stresses Due to Torsion in Cantilever Box Beams. TN 530, June 1935.
- Kuhn, Paul: The Initial Torsional Stiffness of Shells with Interior Webs. TN 542, Sept. 1935.

Box (Cont.)

- Kuhn, Paul: Remarks on the Elastic Axis of Shell Wings. TN 562, April 1936.
- Kuhn, Paul: Stress Analysis of Beams with Shear Deformation of the Flanges. Rept. 608, 1937.
- Kuhn, Paul: Strain Measurements on Small Duralumin Box Beams in Bending. TN 588, Jan. 1937.
- Kuhn, Paul: Approximate Stress Analysis of Multi-Stringer Beams with Shear Deformation of the Flanges. Rept. 636, 1938.
- Kuhn, Paul: Some Elementary Principles of Shell Stress Analysis with Notes on the Use of the Shear Center. TN 691, March 1939.
- Kuhn, Paul: Some Notes on the Numerical Solution of Shear-Lag and Mathematically Related Problems. TN 704, May 1939.
- Ramberg, Walter; McPherson, Albert E. and Levy, Sam: Compressive Tests of a Monocoque Box. TN 721, Aug. 1939.
- Schapitz, E.; Feller, H. and Koller, H.: Experimental and Analytical Investigation of a Monocoque Wing Model Loaded in Bending. TM 915, Oct. 1939.
- Kuhn, Paul: A Recurrence Formula for Shear-Lag Problems. TN 739, Dec. 1939.
- Ebner, H.: The Strength of Shell and Tubular Spar Wings. TM 933, Feb. 1940.
- Reinitzhuber, F.: Stresses in Single-Spar Wing Constructions with Incompletely Built-Up Ribs. TM 937, March 1940.
- Cambilargiu, E.: The Torsion of Box Beams with One Side Lacking. TM 939, April 1940.
- Upson, Ralph H.: Structural Tests of a Stainless Steel Wing Panel by Hydrostatic Loading. TN 786, Nov. 1940.
- Newell, Joseph S. and Reissner, Eric: Shear Lag in Corrugated Sheets Used for the Chord Member of a Box Beam. TN 791, Jan. 1941.
- Kuhn, Paul and Chiarito, Patrick T.: Shear Lag in Box Beams Methods of Analysis and Experimental Investigations. Rept. 739, 1942.

- Erlandsen, Oscar, Jr. and Mead, Lawrence M., Jr.: A Method of Shear-Lag Analysis of Box Beams for Axial Stresses, Shear Stresses, and Shear Center. ARR (WR W-33), April 1942.
- Gottlieb, Robert: Tests of a Stress-Carrying Door in Shear. RB (WR L-254), Aug. 1942.
- Gottlieb, Robert: Tests of a Stress-Carrying Door in Compression. RB (WR L-253), Sept. 1942.
- Charito, Patrick T.: Shear-Lag Tests of Two Box Beams with Flat Covers Loaded to Destruction. ARR (WR L-307), Oct. 1942.
- Lundquist, Eugene E. and Schwartz, Edward B.: A Study of General Instability of Box Beams with Truss-Type Ribs. TN 866, Nov. 1942.
- Levy, Samuel; McPherson, Albert E. and Ramberg, Walter: Torsion Test of a Monocoque Box. TN 872, Nov. 1942.
- McPherson, Albert E.; Ramberg, Walter and Levy, Samuel: Bending Tests of a Monocoque Box. TN 873, Nov. 1942.
- Kuhn, Paul: A Method of Calculating Bending Stresses Due to Torsion. ARR (WR L-352), Dec. 1942.
- Kuhn, Paul: A Procedure for the Shear-Lag Analysis of Box Beams. ARR (WR L-401), Jan. 1943.
- Hildebrand, Francis B. and Reissner, Eric: Least-Work Analysis of the Problem of Shear Lag in Box Beams. TN 893, May 1943.
- Hildebrand, Francis B.: The Exact Solution of Shear-Lag Problems in Flat Panels and Box Beams Assumed Rigid in the Transverse Direction. TN 894, June 1943.
- Kuhn, Paul and Brilmyer, Harold G.: An Approximate Method of Shear-Lag Analysis for Beams Loaded at Right Angles to the Plane of Symmetry of the Cross Section. RB 3I22 (WR L-324), Sept. 1943.
- Duberg, John E.: Comparison of an Approximate and an Exact Method of Shear-Lag Analysis. ARR 4A18 (WR L-310), Jan. 1944.
- Chiarito, Patrick T.: Shear-Lag Tests of Two Box Beams with Corrugated Covers Loaded to Failure. ARR 4A05 (WR L-482), Jan. 1944.

Box (Cont.)

- Kuhn, Paul and Moggio, Edwin M.: Structural Properties of Aluminum-Alloy
 Box Beams with Riveted, Spot-Welded,
 or Cycle-Welded Joints. ARR 4C04,
 March 1944.
- Duberg, John E. and Brilmyer, Harold G.: Tests and Approximate Analysis of Bending Stresses Due to Torsion in a D-Section Box. ARR L4E15 (WR L-37), May 1944.
- McPherson, A. E.; Goldenberg, D. and Zibritosky, G.: Torsion Test to Failure of a Monocoque Box. TN 953, Oct. 1944.
- Kuhn, Paul; Batdorf, S. B. and Brilmyer, Harold G.: Secondary Stresses in Open Box Beams Subjected to Torsion. ARR L4I23 (WR L-14), Nov. 1944.
- Chiarito, Patrick T. and Diskin, Simon H.: Strain Measurements and Strength Tests on the Tension Side of a Box Beam with Flat Cover. ARR L5A13b (WR L-59), Feb. 1945.
- Kempner, Joseph: Application of a Numerical Procedure to Stress Analysis of Stringer-Reinforced Panels. ARR L5C09a (WR L-11), March 1945.
- Peterson, James P.: Shear-Lag Tests of a Box Beam with a Highly Cambered Cover in Tension. ARR L5F27b (WR L-106), July 1945.
- Kuhn, Paul and Brilmyer, Harold G.: Stresses Near the Juncture of a Closed and an Open Torsion Box as Influenced by Bulkhead Flexibility. ARR L5G18 (WR L-2), Aug. 1945.
- Kruszewski, Edwin T.: Bending Stresses Due to Torsion in a Tapered Box Beam. TN 1297, May 1947.
- Hoff, N. J.; Kase, Harry and Liebowitz, Harold: Interaction Between the Spars of Semimonocoque Wings with Cut-Outs. TN 1324, July 1947.

- Kuhn, Paul: Deformation Analysis of Wing Structures. TN 1361, July 1947.
- Kempner, Joseph: Recurrence Formulas and Differential Equations for Stress Analysis of Cambered Box Beams. TN 1466, Oct. 1947.
- Zender, George and Libove, Charles: Stress and Distortion Measurements in a 45° Swept Box Beam Subjected to Bending and to Torsion. TN 1525, March 1948.
- Anderson, Roger A. and Houbolt, John C.: Effect of Shear Lag on Bending Vibration of Box Beams. TN 1583, May 1948.
- Benscoter, Stanley U.: Shear Flows in Multicell Sandwich Sections. TN 1749, Nov. 1948.
- Vlasov, V. S.: Some New Problems on Shells and Thin Structures. TM 1204, March 1949.
- Vlasov, V. Z.: Computation of Thin-Walled Prismatic Shells. TM 1234, June 1949.

BEAMS

(4.4.2)

- Kuhn, Paul and Griffith, George E.: Diagonal Tension in Curved Webs. TN 1481, Nov. 1947.
- Levin, L. Ross: Strength of Thin-Web Beams with Transverse Load Applied at an Intermediate Upright. TN 1544, Feb. 1948.
- Sandlin, Charles W., Jr.: Strength Tests of Shear Webs with Uprights not Connected to the Flanges. TN 1635, June 1948.
- Levin, L. Ross and Sandlin, Charles W., Jr.: Strength Analysis of Stiffened Thick Beam Webs. TN 1820, March 1949.

Shells

(4.5)

- Wagner, Herbert: Structures of Thin Sheet Metal Their Design and Construction. TM 490, Dec. 1928.
- Kuhn, Paul: The Initial Torsional Stiffness of Shells with Interior Webs. TN 542, Sept. 1935.
- Dose, A.: Determination of the Bending and Buckling Effect in the Stress Analysis of Shell Structures Accessible from One Side Only. TM 997, Dec. 1941.
- Davidson, Milton; Houbolt, John C.; Rafel, Norman and Rossman, Carl A.: Preliminary Aerodynamic and Structural Tests Showing the Effect of Compressive Load on the Fairness of a Low-Drag Wing Specimen with Chordwise Hat-Section Stiffeners. ACR 3L02 (WR L-389), Dec. 1943.
- Bradley, Kathryn H. and Axilrod, B. M.: Plastic Mountings for Aircraft Windshields. TN 936, May 1944.
- Reissner, Eric: Small Bending and Stretching of Sandwich-Type Shells. TN 1832, March 1949.
- Hildebrand, F. B.; Reissner, E. and Thomas, G. B.: Notes on the Foundations of the Theory of Small Displacements of Orthotropic Shells. TN 1833, March 1949.
- Vlasov, V. S.: Some New Problems on Shells and Thin Structures. TM 1204, March 1949.

CYLINDERS

(4.5.1)

- Kuhn, Paul: Loads Imposed in Intermediate Frames of Stiffened Shells. TN 687, Feb. 1939.
- Roark, Raymond J.: Stresses and Deflections in Thin Shells and Curved Plates Due to Concentrated and Variously Distributed Loading. TN 806, May 1941.
- Wignot, J. E.; Combs, Henry and Ensrud, A. F.: Analysis of Circular Shell-Supported Frames. TN 929, May 1944.

- Hoff, N. J. and Klein, Bertram: The Inward Bulge Type Buckling of Monocoque Cylinders. I - Calculation of the Effect upon the Buckling Stress of a Compressive Force, a Nonlinear Direct Stress Distribution, and a Shear Force. TN 938, Oct. 1944.
- Prager, W.: On the Interpretation of Combined Torsion and Tension Tests of Thin-Wall Tubes. TN 1501, Jan. 1948.
- Vlasov, V. S.: Some New Problems on Shells and Thin Structures. TM 1204, March 1949.

CIRCULAR (4.5.1.1)

- Schroeder, August: Buckling Tests of Light-Metal Tubes. TM 525, Aug. 1929.
- Mossman, Ralph W. and Robinson, Russell G.: Bending Tests of Metal Monocoque Fuselage Construction. TN 357, Nov. 1930.
- Rhode, Richard V. and Lundquist, Eugene E.: Strength Tests on Paper Cylinders in Compression, Bending, and Shear. TN 370, April 1931.
- Lundquist, Eugene E.: Strength Tests on Thin-Walled Duralumin Cylinders in Torsion. TN 427, Aug. 1932.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Compression. Rept. 473, 1933.
- Donnell, L. H.: Stability of Thin-Walled Tubes Under Torsion. Rept. 479, 1933.
- Burke, Walter F.: Working Charts for the Stress Analysis of Elliptic Rings. TN 444, Jan. 1933.
- Miller, Roy A. and Wood, Karl D.: Formulas for the Stress Analysis of Circular Rings in a Monocoque Fuselage. TN 462, June 1933.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Pure Bending. TN 479, Dec. 1933.

- Circular Cylinders (Cont.)
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Combined Transverse Shear and Bending. TN 523, April 1935.
- Wagner, H. and Ballerstedt, W.: Tension Fields in Originally Curved, Thin Sheets During Shearing Stresses. TM 774, Aug. 1935.
- Heck, O. S. and Ebner, H.: Methods and Formulas for Calculating the Strength of Plate and Shell Constructions as Used in Airplane Design. TM 785, Feb. 1936.
- Stang, Ambrose H.; Ramberg, Walter and Back, Goldie: Torsion Tests of Tubes. Rept. 601, 1937.
- Wagner, H.: The Stress Distribution in Shell Bodies and Wings as an Equilibrium Problem. TM 817, Feb. 1937.
- Niles, Alfred S.; Buckwalter, John C. and Reed, Warren D.: Bending Tests of Circular Cylinders of Corrugated Aluminum-Alloy Sheet. TN 595, March 1937.
- Pekelsma, Robert E.: The Behavior of Thin-Wall Monocoque Cylinders Under Torsional Vibration. TN 607, Aug. 1937.
- Ebner, H.: The Strength of Shell Bodies -Theory and Practice. TM 838, Sept. 1937.
- Drescher, K. and Gropler, H.: Stresses in Reinforcing Rings Due to Axial Forces in Cylindrical and Conical Stressed Skins. TM 847, Jan. 1938.
- Schapitz, E. and Krumling, G.: Load Tests on a Stiffened Circular Cylindrical Shell. TM 864, May 1938.
- Ebner, H. and Koller, H.: Calculation of Load Distribution in Stiffened Cylindrical Shells. TM 866, June 1938.
- Schapitz, E.: The Twisting of Thin-Walled, Stiffened Circular Cylinders. TM 878, Oct. 1938.
- Wenzek, W. A.: The Effective Width of Curved Sheet After Buckling. TM 880, Nov. 1938.
- Moore, R. L. and Paul, D. A.: Torsional Stability of Aluminum Alloy Seamless Tubing. TN 696, March 1939.
- Holt, Marshall: Tests on Stiffened Circular Cylinders. TN 800, March 1941.

- Blumrich, S.: Contribution to the Design of Plywood Shells. TM 1031, Oct. 1942.
- Lundquist, Eugene E. and Schuette, Evan H.: Strength Tests of Thin-Wall Truncated Cones of Circular Section. ARR (WR L-442), Dec. 1942.
- Osgood, William R.: Round-Heat-Treated Chromium-Molybdenum-Steel Tubing Under Combined Loads. TN 896, July 1943.
- Guggenheim Aeronautical Laboratory,
 California Institute of Technology:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 I Review of Theory and Bibliography.
 TN 905, July 1943.
- Guggenheim Aeronautical Laboratory,
 California Institute of Technology:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 II Preliminary Tests of Wire-Braced Specimens and Theoretical Studies.
 TN 906, July 1943.
- Guggenheim Aeronautical Laboratory, California Institute of Technology: Some Investigations of the General Instability of Stiffened Metal Cylinders. III - Continuation of Tests of Wire-Braced Specimens and Preliminary Tests of Sheet-Covered Specimens. TN 907, Aug. 1943.
- Guggenheim Aeronautical Laboratory,
 California Institute of Technology:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 IV Continuation of Tests of SheetCovered Specimens and Studies of the
 Buckling Phenomena of Unstiffened
 Circular Cylinders. TN 908, Aug.
 1943.
- Guggenheim Aeronautical Laboratory,
 California Institute of Technology:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 V Stiffened Metal Cylinders Subjected to Pure Bending. TN 909, Aug. 1943.
- Sherwood, A. W.: The Strength of Thin-Wall Cylinders of D Cross Section in Combined Pure Bending and Torsion. TN 904, Sept. 1943.
- Guggenheim Aeronautical Laboratory, California Institute of Technology: Some Investigations of the General Instability of Stiffened Metal Cylinders. VI - Stiffened Metal Cylinders Subjected to Combined Bending and Transverse Shear. TN 910, Sept. 1943.
- Smull, Leland K.: An Investigation of the Validity of Wang's Formula for the Critical Load for Circular Cylindrical Grids. RB 3J28, Oct. 1943.

Circular Cylinders (Cont.)

- Guggenheim Aeronautical Laboratory, California Institute of Technology: Some Investigations of the General Instability of Stiffened Metal Cylinders. VII - Stiffened Metal Cylinders Subjected to Combined Bending and Torsion. TN 911, Nov. 1943.
- Donnell, L. H.: The Stability of Isotropic or Orthotropic Cylinders or Flat or Curved Panels, Between and Across Stiffeners, with Any Edge Conditions Between Hinged and Fixed, Under Any Combination of Expression and Shear. TN 918, Dec. 1943.
- Moore, R. L. and Wescoat, C.: Torsion Tests of Stiffened Circular Cylinders. ARR 4E31 (WR W-89), May 1944.
- Crate, Harold; Batdorf, S. B. and Baab, George W.: The Effect of Internal Pressure on the Buckling Stress of Thin-Walled Circular Cylinders Under Torsion. ARR L4E27 (WR L-67), May 1944.
- Hoff, N. J.; Levy, Robert S. and Kempner, Joseph K.: Numerical Procedures for the Calculation of the Stresses in Monocoques. I - Diffusion of Tensile Stringer Loads in Reinforced Panels. TN 934, June 1944.
- Hoff, N. J.; Fuchs, S. J. and Cirillo, Adam J.: The Inward Bulge Type Buckling of Monocoque Cylinders. II Experimental Investigation of the Buckling in Combined Bending and Compression. TN 939, Oct. 1944.
- Bruhn, Elmer F.: Tests on Thin-Walled Celluloid Cylinders to Determine the Interaction Curves Under Combined Bending, Torsion, and Compression or Tension Loads. TN 951, Jan. 1945.
- Hoff, N. J. and Klein, Bertram: The Inward Bulge Type Buckling of Monocoque Cylinders. III Revised Theory Which Considers the Shear Strain Energy. TN 968, April 1945.
- Pian, Theodore Hsueh-Huang: Analytical Study of Transmission of Load from Skin to Stiffeners and Rings of Pressurized Cabin Structure. TN 993, Oct. 1945.
- Kuhn, Paul; Duberg, John E. and Griffith, George E.: The Effect of Concentrated Loads on Flexible Rings in Circular Shells. ARR L5H23 (WR L-66), Dec. 1945.

- Hoff, N. J. and Boley, Bruno A.: Stresses in and General Instability of Monocoque Cylinders with Cutouts. I - Experimental Investigation of Cylinders with a Symmetric Cutout Subjected to Pure Bending. TN 1013, June 1946.
- Hoff, N. J.; Boley, Bruno A. and Klein, Bertram: Stresses in and General Instability of Monocoque Cylinders with Cutouts. II - Calculation of the Stresses in a Cylinder with a Symmetric Cutout. TN 1014, June 1946.
- Nelson, David H.: Effect of Change in Cross Section upon Stress Distribution in Circular Shell-Supported Frames. TN 1098, July 1946.
- Hoff, N. J. and Boley, Bruno A.: The Shearing Rigidity of Curved Panels Under Compression. TN 1090, Aug. 1946.
- Duberg, John E. and Kempner, Joseph: Stress Analysis by Recurrence Formula of Reinforced Circular Cylinders Under Lateral Loads. TN 1219, March 1947.
- Dunn, Louis G.: Some Investigations of the General Instability of Stiffened Metal Cylinders. VIII - Stiffened Metal Cylinders Subjected to Pure Torsion. TN 1197, May 1947.
- Hoff, N. J.; Boley, Bruno A. and Klein, Bertram: Stresses in and General Instability of Monocoque Cylinders with Cutouts. III - Calculation of the Buckling Load of Cylinders with Symmetric Cutout Subjected to Pure Bending. TN 1263, May 1947.
- Kempner, Joseph and Duberg, John E.: Charts for Stress Analysis of Reinforced Circular Cylinders Under Lateral Loads. TN 1310, May 1947.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Shear Stress of Curved Rectangular Panels. TN 1348, May 1947.
- Weigand, A.: Determination of the Stress Concentration Factor of a Stepped Shaft Stressed in Torsion by Means of Precision Strain Gauges. TM 1179, June 1947.
- Batdorf, S. B.: A Simplified Method of Elastic-Stability Analysis for Thin Cylindrical Shells. I - Donnell's Equation. TN 1341, June 1947.
- Batdorf, S. B.: A Simplified Method of Elastic-Stability Analysis for Thin Cylindrical Shells. II - Modified Equilibrium Equation. TN 1342, June 1947.

- Circular Cylinders (Cont.)
- Batdorf, S. B.; Schildcrout, Murry and Stein, Manuel: Critical Stress of Thin-Walled Cylinders in Axial Compression. TN 1343, June 1947.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Stress of Thin-Walled Cylinders in Torsion. TN 1344, June 1947.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Combinations of Torsion and Direct Axial Stress for Thin-Walled Cylinders. TN 1345, June 1947.
- Dunn, Louis G.: Some Investigations of the General Instability of Stiffened Metal Cylinders. IX - Criterions for the Design of Stiffened Metal Cylinders Subject to General Instability Failures. TN 1198, Nov. 1947.
- Hoff, N. J. and Klein, Bertram: Stresses in and General Instability of Monocoque Cylinders with Cutouts. V - Calculation of the Stresses in Cylinders with Side Cutout. TN 1435, Jan. 1948.
- Prager, W.: On the Interpretation of Combined Torsion and Tension Tests of Thin-Wall Tubes. TN 1501, Jan. 1948.
- Hoff, N. J.; Boley, Bruno A. and Viggiano, Louis R.: Stresses in and General Instability of Monocoque Cylinders with Cutouts. IV - Pure Bending Tests of Cylinders with Side Cutout. TN 1264, Feb. 1948.
- Hoff, N. J.; Klein, Bertram and Boley, Bruno A.: Stresses in and General Instability of Monocoque Cylinders with Cutouts. VI - Calculation of the Buckling Load of Cylinders with Side Cutout Subjected to Pure Bending. TN 1436, March 1948.
- Marin, Joseph; Faupel, J. H.; Dutton, V. L. and Brossman, M. W.: Biaxial Plastic Stress-Strain Relations for 24S-T Aluminum Alloy. TN 1536, May 1948.
- Thomsen, E. G.; Lotze, I. and Dorn, J. E.: Fracture Strength of 75S-T Aluminum Alloy Under Combined Stress. TN 1551, July 1948.
- Thomsen, E. G.; Cornet, I.; Lotze, I. and Dorn, J. E.: Investigation on the Validity of an Ideal Theory of Elasto-Plasticity for Wrought Aluminum Alloys. TN 1552, July 1948.
- Hoff, N. J.; Boley, Bruno A. and Nardo, S. V.: The Inward Bulge Type Buckling of Monocoque Cylinders. IV Experimental Investigation of Cylinders Subjected to Pure Bending. TN 1499, Sept. 1948.

- Hoff, N. J.; Klein, Bertram and Boley, Bruno A.: The Inward Bulge Type Buckling of Monocoque Cylinders. V - Revised Strain Energy Theory Which Assumes a More General Deflected Shape at Buckling. TN 1505, Sept. 1948.
- Hoff, N. J. and Libby, Paul A.: Recommendations for Numerical Solution of Reinforced-Panel and Fuselage-Ring Problems. TN 1786, Dec. 1948.

ELLIPTICAL (4.5.1.2)

- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Combined Transverse Shear and Bending. TN 523, April 1935.
- Lundquist, Eugene E. and Burke, Walter F.: Strength Tests of Thin-Walled Duralumin Cylinders of Elliptic Section. TN 527, May 1935.
- Wagner, H.: The Stress Distribution in Shell Bodies and Wings as an Equilibrium Problem. TM 817, Feb. 1937.
- Heck, O. S.: The Stability of Orthotropic Elliptic Cylinders in Pure Bending. TM 834, July 1937.
- Drescher, K. and Gropler, H.: Stresses in Reinforcing Rings Due to Axial Forces in Cylindrical and Conical Stressed Skins. TM 847, Jan. 1938.
- Ebner, H. and Koller, H.: Calculation of Load Distribution in Stiffened Cylindrical Shells. TM 866, June 1938.
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Strength Tests of Thin-Walled Elliptic Duralumin Cylinders in Pure Bending and in Combined Pure Bending and Torsion. TN 851, June 1942.
- Sechler, E. E. and Frederick, J. L.: The Strength of Semielliptical Cylinders Subjected to Combined Loadings. TN 957, Feb. 1945.
- Hoff, N. J. and Libby, Paul A.: Recommendations for Numerical Solution of Reinforced-Panel and Fuselage-Ring Problems. TN 1786, Dec. 1948.

BOXES

(4.5.2)

- Ebner, H.: The Strength of Shell and Tubular Spar Wings. TM 933, Feb. 1940.
- Kuhn, Paul: The Influence of Bulkhead Spacing on Bending Stresses Due to Torsion. ARR (WR L-501), May 1942.

Boxes (Cont.)

- Levy, Samuel; McPherson, Albert E. and Ramberg, Walter: Torsion Test of a Monocoque Box. TN 872, Nov. 1942.
- Kuhn, Paul: A Method of Calculating Bending Stresses Due to Torsion. ARR (WR L-352), Dec. 1942.
- Duberg, John E. and Brilmyer, Harold G.: Tests and Approximate Analysis of Bending Stresses Due to Torsion in a D-Section Box. ARR L4E15 (WR L-37), May 1944.
- McPherson, A. E.; Goldenberg, D. and Zibritosky, G.: Torsion Test to Failure of a Monocoque Box. TN 953, Oct. 1944.

- Kuhn, Paul and Moggio, Edwin M.: Stresses Around Large Cut-Outs in Torsion Boxes. TN 1066, May 1946.
- Kruszewski, Edwin T.: Bending Stresses Due to Torsion in a Tapered Box Beam. TN 1297, May 1947.
- Kempner, Joseph: Recurrence Formulas and Differential Equations for Stress Analysis of Cambered Box Beams. TN 1466, Oct. 1947.
- Vlasov, V. Z.: Computation of Thin-Walled Prismatic Shells. TM 1234, June 1949.

Connections

(4.6)

- John A. Roebling's Sons Co.: Report on Investigations of Aviation Wires and Cables, Their Fastenings and Terminal Connections. Rept. 3, 1915.
- Wendt, F.: The Establishment of Standards in Airplane Construction. MP 4, May 1921.
- Anon.: "AM" Flexible Metal Joint. Manufactured by E. Martin, Oullins, France. TM 191, Feb. 1923.
- Kutzbach, K.: The Flexible Mounting of an Airplane Engine. TN 148, July 1923.

BOLTED

(4.6.1)

- Eydam, P.: Fittings and Other Structural Parts of Airplanes. TN 160, Oct. 1923.
- Trayer, G. W.: Bearing Strength of Wood Under Steel Aircraft Bolts and Washers and Other Factors Influencing Fitting Design. TN 296, Oct. 1928.
- Brenner, Paul: Lautal as a Material for Airplane Construction. TM 524, Aug. 1929.
- From Flight, May 9, 1929: Handley Page Metal Construction. TM 533, Oct. 1929.
- Mandel, Merven W.: Comparative Tests of the Tightness of Two Types of Flush Rivet Furnished by the Grumman Aircraft Engineering Corporation. MR (WR L-297), June 1943.
- Tate, Manford B. and Rosenfeld, Samuel J.: Preliminary Investigation of the Loads Carried by Individual Bolts in Bolted Joints. TN 1051, May 1946.
- Jackson, L. R.; Wilson, W. M.; Moore, H. F. and Grover, H. J.: The Fatigue Characteristics of Bolted Lap Joints of 24S-T Alclad Sheet Materials. TN 1030, Oct. 1946.
- Levin, L. Ross and Nelson, David H.: Effect of Rivet or Bolt Holes on the Ultimate Strength Developed by 24S-T and Alclad 75S-T Sheet in Incomplete Diagonal Tension. TN 1177, Jan. 1947.
- Vogt, F.: The Load Distribution in Bolted or Riveted Joints in Light-Alloy Structures. TM 1135, April 1947.

- Ross, Robert D.: An Electrical Computer for the Solution of Shear-Lag and Bolted-Joint Problems. TN 1281, May 1947.
- Rosenfeld, Samuel J.: Analytical and Experimental Investigation of Bolted Joints. TN 1458, Oct. 1947.
- Norris, C. B. and Voss, A. W.: An Improved Photoelastic Method for Determining Flane Stresses. TN 1410, Jan. 1948.
- Langdon, Howard H. and Fried, Bernard: Fatigue of Gusseted Joints. TN 1514, Sept. 1948.

RIVETED

(4.6.2)

- Rettew, H. F. and Thumin, G.: Tests on Riveted Joints in Sheet Duralumin. TN 165, Nov. 1923.
- Brenner, Paul: Lautal as a Material for Airplane Construction. TM 524, Aug. 1929.
- From Flight, May 9, 1929: Handley Page Metal Construction. TM 533, Oct. 1929.
- Hilbes, W.: Riveted Joints in Thin Plates. TM 590, Nov. 1930.
- Pleines, Wilhelm: Riveting in Metal Airplane Construction. Part I. From Luftfahrtforschung, Vol. VII, No. 1, April 30, 1930. TM 596, Dec. 1930.
- Pleines, Wilhelm: Riveting in Metal Airplane Construction. Part II. From Luftfahrtforschung, Vol. VII, No. 1, April 30, 1930. TM 597, Dec. 1930.
- Pleines, Wilhelm: Riveting in Metal Airplane Construction. Part III. TM 598, Dec. 1930.
- Pleines, Wilhelm: Riveting in Metal Airplane Construction. Part IV. From Luftfahrtforschung, Vol. VII, No. 1, April 30, 1930. TM 599, Dec. 1930.
- Brueggeman, William C.: Mechanical Properties of Aluminum-Alloy Rivets. TN 585, Nov. 1936.

Riveted (Cont.)

- Brueggeman, W. C. and Roop, Frederick C.: Mechanical Properties of Flush-Riveted Joints. Rept. 701, 1940.
- Roop, Frederick C.: Effect of Aging on Mechanical Properties of Aluminum-Alloy Rivets. Rept. 724, 1941.
- Submitted by Glenn L. Martin Company to the National Bureau of Standards: On 115-Degree Machine-Countersunk Joints. Mechanical Properties of Flush-Riveted Joints. Progress Report No. 1, Dec. 1941.
- Brueggeman, William C.: Progress Summary No. 1. Mechanical Properties of Flush-Riveted Joints Submitted by Five Airplane Manufacturers. RB (WR W-79), Feb. 1942.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Models Used in Aircraft. II. TN 842, Feb. 1942.
- Lundquist, Eugene E. and Gottlieb, Robert: A Study of the Tightness and Flushness of Machine-Countersunk Rivets for Aircraft. RB (WR L-294), June 1942.
- Templin, R. L. and Fogwell, J. W.: Design of Tools for Press-Countersinking or Dimpling 0.040-Inch-Thick 24S-T Sheet. TN 854, Aug. 1942.
- Levy, Samuel; McPherson, Albert E. and Ramberg, Walter: Effect of Rivet and Spot-Weld Spacing on the Strength of Axially Loaded Sheet-Stringer Panels of 24S-T Aluminum Alloy. TN 856, Aug. 1942.
- Gottlieb, Robert and Mandel, Merven W.:
 Comparison of Tightness of 78°
 Machine-Countersunk Rivets Driven in
 Holes Prepared with 78° and 82°
 Countersinking Tools. RB (WR L-252),
 Sept. 1942.
- Gottlieb, Robert: Effect of Countersunk Depth on the Tightness of Two Types of Machine-Countersunk Rivet. RB (WR L-315), Oct. 1942.
- Hartmann, E. C. and Stickley, G. W.:
 Summary of Results of Tests Made by
 Aluminum Research Laboratories of
 Spot-Welded Joints and Structural
 Elements. TN 869, Nov. 1942.
- Gottlieb, Robert: Test Data on the Shear Strength of Machine Countersunk-Riveted Joints Assembled by an NACA Flush-Riveting Procedure. RB (WR L-523), Dec. 1942.

- Gottlieb, Robert and Bartone, Leonard M.:
 Shear Tests on Du Pont Explosive
 Rivets with the Countersunk Head
 Milled Flush After Expansion. RB
 3E06 (WR L-393), May 1943.
- Gottlieb, Robert and Mandel, Merven W.: An Improved Flush-Rivet Milling Tool. RB 3E18, May 1943.
- Mandel, Merven W. and Schuette, Evan H.: Test Data on the Shear Strength of Joints Assembled with Round-Head and Brazier-Head Rivets. RB 3F21 (WR L-519), June 1943.
- Seliger, Victor: Effect of Rivet Pitch upon the Fatigue Strength of Single-Row Riveted Joints of 0.025- to 0.025-Inch 24S-T Alclad. TN 900, July 1943.
- Sharp, W. H.: The Effect of the Type of Specimen on the Shear Strengths of Driven Rivets. TN 916, Nov. 1943.
- Crate, Harold: A Preliminary Study of Machine-Countersunk Flush Rivets Subjected to a Combined Static and Alternating Shear Load. RB 3L01 (WR L-495), Dec. 1943.
- Mandel, Merven W.: Comparative Tests of the Strength and Tightness of Commercial Flush Rivets of One Type and NACA Flush Rivets in Machine-Countersunk and Counterpunched Joints. RB 4B18 (WR L-297), Feb. 1944.
- Mandel, Merven W.; Crate, Harold and Schuette, Evan H.: Tests of Hydraulically Expanded Rivets. RB 4C27 (WR L-293), March 1944.
- Kuhn, Paul and Moggio, Edwin M.: Structural Properties of Aluminum-Alloy Box Beams with Riveted, Spot-Welded, or Cycle-Welded Joints. ARR 4C04, March 1944.
- Schuette, Evan H.; Bartone, Leonard M. and Mandel, Merven W.: Tensile Tests of Round-Head, Flat-Head, and Brazier-Head Rivets. TN 930, March 1944.
- Hartmann, E. C. and Wescoat, C.: The Shear Strength of Aluminum Alloy Driven Rivets as Affected by Increasing D/t Ratios. TN 942, July 1944.
- Zamboky, A. N.: Artificial Aging of Riveted Joints Made in Alclad 24S-T Sheet Using A17S-T, 17S-T, and 24S-T Rivets. TN 948, Sept. 1944.
- Hartmann, E. C.; Lyst, J. O. and Andrews, H. J.: Fatigue Tests of Riveted Joints. Progress Report of Tests of 17S-T and 53S-T Joints. ARR 4I15 (WR W-55), Sept. 1944.

Riveted (Cont.)

- Mandel, Merven W. and Bartone, Leonard M.: Tensile Tests of NACA and Conventional Machine-Countersunk Flush Rivets. ARR L4F06 (WR L-176), Oct. 1944.
- Dow, Norris F. and Hickman, William A.:
 Preliminary Investigation of the Relation of the Compressive Strength of
 Sheet-Stiffener Panels to the Diameter
 of Rivet Used for Attaching Stiffeners
 to Sheet. RB L4I13 (WR L-61), Nov.
 1944.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Aircraft Joints. I Comparison of Spot-Weld and Rivet Patterns in 24S-T Alclad Sheet Comparison of 24S-T Alclad and 75S-T Alclad. ARR 4F01 (WR W-56), Dec. 1944.
- Andrews, H. J. and Holt, M.: Fatigue Tests on 1/8-Inch Aluminum Alloy Rivets. TN 971, Feb. 1945.
- Moore, R. L. and Hill, H. N.: Comparative Fatigue Tests of Riveted Joints of Alclad 24S-T, Alclad 24S-T81, Alclad 24S-RT, Alclad 24S-T86, and Alclad 75S-T Sheet. RB 5F11 (WR W-76), Aug. 1945.
- Dow, Norris F. and Hickman, William A.: Effect of Variation in Diameter and Pitch of Rivets on Compressive Strength of Panels with Z-Section Stiffeners. I Panels with Close Stiffener Spacing That Fail by Local Buckling. RB L5G03 (WR L-44), Aug. 1945.
- Maney, G. A. and Wyly, L. T.: Impact Properties at Different Temperatures of Flush-Riveted Joints for Aircraft Manufactured by Various Riveting Methods. ARR 5F07 (WR W-53), Sept. 1945.
- Pian, Theodore Hsueh-Huang: Analytical Study of Transmission of Load from Skin to Stiffeners and Rings of Pressurized Cabin Structure. TN 993, Oct. 1945.
- Maney, G. A. and Wyly, L. T.: Fatigue Strength of Flush-Riveted Joints for Aircraft Manufactured by Various Riveting Methods. ARR 5H28 (WR W-82), Dec. 1945.
- Hartmann, E. C. and Zamboky, A. N.: Comparison of Static Strengths of Machine Countersunk Riveted Joints in 24S-T, X75S-T, and Alclad 75S-T Sheet. TN 1036, May 1946.

- Crate, Harold; Ochiltree, David W. and Graves, Walter T.: Effect of Ratio of Rivet Pitch to Rivet Diameter on the Fatigue Strength of Riveted Joints of 24S-T Aluminum-Alloy Sheet. TN 1125, Sept. 1946.
- Levin, L. Ross and Nelson, David H.:
 Effect of Rivet or Bolt Holes on the
 Ultimate Strength Developed by 24S-T
 and Alclad 75S-T Sheet in Incomplete
 Diagonal Tension. TN 1177, Jan. 1947.
- Schuette, Evan H. and Niles, Donald E.:
 Data on Optimum Length, Shear
 Strength, and Tensile Strength of AgeHardened 17S-T Machine-Countersunk
 Rivets in 75S-T Sheet. TN 1205, March
 1947.
- Vogt, F.: The Distribution of Loads on Rivets Connecting a Plate to a Beam Under Transverse Loads. TM 1134, April 1947.
- Vogt, F.: The Load Distribution in Bolted or Riveted Joints in Light-Alloy Structures. TM 1135, April 1947.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. Panels of Various Lengths
 with Close Stiffener Spacing. TN 1421,
 Sept. 1947.
- Rosenfeld, Samuel J.: Analytical and Experimental Investigation of Bolted Joints. TN 1458, Oct. 1947.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. Panels of Various Stiffener
 Spacings That Fail by Local Buckling.
 TN 1467, Oct. 1947.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Aircraft Joints. II Fatigue Characteristics of Sheet and Riveted Joints of 0.040-Inch 24S-T, 75S-T, and R303-T275 Aluminum Alloys. TN 1485, Feb. 1948.
- Langdon, Howard H. and Fried, Bernard: Fatigue of Gusseted Joints. TN 1514, Sept. 1948.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. Panels That Fail by Local
 Buckling and Have Various Values of
 Width-to-Thickness Ratio for the Webs
 of the Stiffeners. TN 1737, Nov. 1948.

WELDED

(4.6.3)

- Nelson, Wm., Lieut. Comdr., (CC), U.S.N.: Duralumin Welding. TM 399, Feb. 1927.
- Rechtlich, A.: Tensile Strength of Welded Steel Tubes. First Series of Experiments. TM 445, Jan. 1928.
- Rechtlich, A. and Schrenk, M.: Welding in Airplane Construction. TM 453, Feb. 1928.
- Miller, W. B.: Welding of High Chromium Steels. TN 290, June 1928.
- Kuchel, Ludwig: Autogenous Welding in Airplane Construction. TM 523, July 1929.
- Brenner, Paul: Lautal as a Material for Airplane Construction. TM 524, Aug. 1929.
- Hoffman, W.: Welding Rustproof Steels. TM 531, Sept. 1929.
- Bull, H. and Johnson, Lawrence: Welding of Stainless Materials. TM 532, Sept. 1929.
- From Flight, May 9, 1929: Handley Page Metal Construction. TM 533, Oct. 1929.
- Whittemore, H. L. and Brueggeman, W. C.: Strength of Welded Joints in Tubular Members for Aircraft. Rept. 348, 1930.
- Müller, J.: Weldability of High-Tensile Steels from Experience in Airplane Construction with Special Reference to Welding Crack Susceptibility. TM 779, Nov. 1935.
- Brueggeman, W. C.: Strength of Welded Aircraft Joints. Rept. 584, 1937.
- Müller, J.: Increase of the Specific Load Under Tension, Compression, and Buckling of Welded Steel Tubes in Airplane Construction by Suitable Treatment of Structural Steel and by Proper Design. TM 912, Oct. 1939.
- Müller, J.: The Cause of Welding Cracks in Aircraft Steels. TM 955, Oct. 1940.
- Hess, W. F.: Wyant, R. A. and Averbach, B. L.: Aircraft Spot Welding Research. OCR Progress Report No. 1, May 1941.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of the Surface Treatment of Alclad 24S-T in Preparation for Spot-Welding. OCR Progress Report No. 3, Sept. 1941.

- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Report on Investigation of Spot-Weld Test Specimens. I - Comparison of Specimen Types and Dimensions -Alclad 24S-T - 0.020", 0.040", 0.064" in Thickness. OCR Progress Report No. 2, Sept. 1941.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of Spot Weld Test Specimens. II Comparison of Specimen Types and Dimensions 52S 1/2H, 0.040" in Thickness. OCR Progress Report No. 4, Oct. 1941.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Models Used in Aircraft - II. TN 842, Feb. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of the Spot-Welding of Aluminum Alloys Using Condenser-Discharge Equipment Provided by the Taylor-Winfield Corporation. OCR Progress Report No. 5, March 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Examination of Spot Welds in Alclad 24S-T. OCR Progress Report No. 6, March 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of the Spot-Welding of Aluminum Alloys Using Magnetic Energy Storage Equipment Provided by the Sciaky Brothers. OCR Progress Report No. 7, May 1942.
- Levy, Samuel; McFherson, Albert E. and Ramberg, Walter: Effect of Rivet and Spot-Weld Spacing on the Strength of Axially Loaded Sheet-Stringer Panels of 24S-T Aluminum Alloy. TN 856, Aug. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: The Spot Welding of Dissimilar Thicknesses of Alclad 24S-T. OCR Progress Report No. 8, Sept. 1942.
- Hartmann, E. C. and Stickley, G. W.:
 Summary of Results of Tests Made by
 Aluminum Research Laboratories of
 Spot-Welded Joints and Structural
 Elements. TN 869, Nov. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of Current Wave Form for Spot-Welding Alclad 24S-T, 0.020 Inch in Thickness. OCR Progress Report No. 9, Nov. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: The Surface Treatment of Alclad 24S-T Prior to Spot Welding. OCR Progress Report No. 10, Dec. 1942

- Russell, H. W. and Jackson, L. R.: Progress Report on Fatigue of Spot-Welded Aluminum. ARR (WR W-38), Feb. 1943.
- Hess, W. F.; Wyant, R. A.; Averbach, B. L. and Winsor, F. J.: An Investigation of Electrode-Pressure Cycles and Current Wave Forms for Spot-Welding Alclad 24S-T. OCR Progress Report No. 11, April 1943.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: The Surface Treatment at Room Temperature of Aluminum Alloys for Spot Welding. OCR Progress Report No. 12, April 1943.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Characteristics of Spot-Welded 24S-T Aluminum Alloy. ARR 3F16 (WR W-64), June 1943.
- Hess, W. F.; Wyant, R. A.; Averbach, B. L. and Winsor, F. J.: Some Observations of Spot-Weld Consistency in Aluminum Alloys. OCR Progress Report No. 13, Oct. 1943.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: An Investigation of the Effect of Spot Welding on the Sheet Efficiency of Aluminum Alloy 24S-T Under Static Load. OCR Progress Report No. 14, Oct. 1943.
- Russell, H. W.: Fatigue Strength and Related Characteristics of Spot-Welded Joints in 24S-T Alclad Sheet. ARR 3L01 (WR W-61), Dec. 1943.
- Hess, W. F. and Nippes, E. F., Jr.: A Method for Welding Sheet Aluminum to SAE 4140 Steel. ARR 4A01 (WR W-102), Jan. 1944.
- Kuhn, Paul and Moggio, Edwin M.: Structural Properties of Aluminum-Alloy
 Box Beams with Riveted, Spot-Welded,
 or Cycle-Welded Joints. ARR 4C04,
 March 1944.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Joints in 24S-T Alclad Sheet. ARR 4E30 (WR W-63), May 1944.
- Hess, W. F.; Wyant, R. A.; Winsor, F. J. and Cook, H. C.: An Investigation of the Fatigue Strength of Spot Welds in the Aluminum Alloy Alclad 24S-T. OCR Progress Report No. 15, Aug. 1944.
- McMaster, R. C.; Manildi, J. F. and Woolsey, C. C.: Nondestructive Test Methods for Spot Welds in Aluminum Alloys. TN 945, Nov. 1944.

- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Aircraft Joints. I Comparison of Spot-Weld and Rivet Patterns in 24S-T Alclad Sheet Comparison of 24S-T Alclad and 75S-T Alclad. ARR 4F01 (WR W-56), Dec. 1944.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Further Investigation of the Effect of Spot Welds on the Sheet Efficiency of Alclad 24S-T. OCR Progress Report No. 16, Feb. 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: The Spot Welding of Ten Aluminum Alloys in the 0.040-Inch Gage. OCR Progress Report No. 18, July 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: The Spot-Welding of Multiple Thicknesses of 0.040-Inch Alclad 24S-T. OCR Progress Report No. 17, Sept. 1945.
- Vogt, F.: The Load Distribution in Bolted or Riveted Joints in Light-Alloy Structures. TM 1135, April 1947.
- Voldrich, C. B. and Armstrong, E. T.:
 Effect of Variables in Welding Technique on the Strength of Direct-Current Metal-Arc-Welded Joints in Aircraft Steel. I Static Tension and Bending Fatigue Tests of Joints in SAE 4130 Steel Sheet. TN 1261, July 1947.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: The Spot Welding of Dissimilar Allminum Alloys in the 0.040-Inch Thickness. TN 1322, Oct. 1947.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: The Spot Welding of Alclad 24S-T in Thicknesses of 0.064, 0.081, and 0.102 Inch. TN 1411, Nov. 1947.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: The Effect of Preheating and Postheating on the Quality of Spot Welds in Aluminum Alloys. TN 1415, Nov. 1947.
- Hess, W. F. and Winsor, F. J.: Further Investigation of Preheating and Postheating in Spot-Welding 0.040-Inch Alclad 24S-T. TN 1440, Dec. 1947.
- Voldrich, C.B. and Armstrong, E.T.:
 Effect of Variables in Welding Technique on the Strength of Direct-Current Metal-Arc-Welded Joints in Aircraft Steel. II Repeated-Stress Tests of Joints in SAE 4130 Seamless Steel Tubing. TN 1262, April 1948.
- Langdon, Howard H. and Fried, Bernard: Fatigue of Gusseted Joints. TN 1514, Sept. 1948.

Welded (Cont.)

Zeyen, K. L.: Susceptibility to Welding Cracking, Welding Sensitivity, Susceptibility to Welding Seam Cracking, and Test Methods for These Failures. TM 1249, June 1949.

BONDED

(4.6.4)

Elmendorf, Armin: Data on the Design of Plywood for Aircraft. Rept. 84, 1920.

Gallo, Gino: Tin Soldering of Aluminum and Its Alloys. TM 45, Oct. 1921.

of W. The condition in Bolist of Exercic lond an Light Street Structure of Street Street

- Truax, T. R.: Gluing Practice at Aircraft Manufacturing Plants and Repair Stations. TN 291, July 1928.
- Lundquist, Eugene E.; Kotanchik, Joseph N. and Zender, George W.: A Study of the Compressive Strength of Stiffened Plywood Panels. RB, Aug. 1942.
- Kuhn, Paul and Moggio, Edwin M.: Structural Properties of Aluminum-Alloy
 Box Beams with Riveted, Spot-Welded,
 or Cycle-Welded Joints. ARR 4C04,
 March 1944.
- Axilrod, B. M. and Jirauch, D. H.: Bonding Strengths of Adhesives at Normal and Low Temperatures. TN 964, Jan. 1945.

Loads and Stresses

(4.7)

- Zahm, A. F. and Crook, L. H.: Airplane Stress Analysis. Rept. 82, 1920.
- Hoff, Wilhelm: Analysis of Stresses in German Airplanes. Rept. 143, 1922.
- Baumann, A.: Strength Calculations on Airplanes. TM 341, Dec. 1925.
- Supplement to "Bulletin de la Chambre Syndicale des Industries Aeronautiques": Permanent Commission of Aeronautical Studies. Report No. 4. TM 402, March 1927.
- Kahn, L. L.: Stressed Coverings in Naval and Aeronautic Construction. TM 447, Jan. 1928.
- Anon.: Airplane Strength Calculations and Static Tests in Russia (An Attempt at Standardization). TM 480, Sept. 1928.
- Burgess, C. P.: Flight Tests on U.S.S. "Los Angeles" Part II Stress and Strength Determination. Rept. 325, 1929.
- Steigenberger, O.: Calculation of the Pressures on Aircraft Engine Bearings. TM 543, Dec. 1929.
- Herrmann, H.: Relative Economy of Different Methods of Airplane Construction. TM 618, April 1931.
- Küssner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. I German Loading Conditions up to 1926. TM 716, July 1933.
- Küssner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. II Loading Conditions in Germany (Continued), England, and the United States. TM 717, July 1933.
- Kussner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. III Loading Conditions in France, Italy, Holland, and Russia Aims at Standardization. TM 718, Aug. 1933.
- Teichmann, Alfred: Safety and Design in Airplane Construction. TM 755, Oct. 1934.

- Silverstein, Abe and Gulick, B. G.: Ground-Handling Forces on a 1/40-Scale Model of the U.S. Airship "Akron." Rept. 566, 1936.
- Gough, M. N. and Beard, A. P.: Limitations of the Pilot in Applying Forces to Airplane Controls. TN 550, Jan. 1936.
- McAvoy, William H.: Maximum Forces Applied by Pilots to Wheel-Type Controls. TN 623, Nov. 1937.
- Dose, A.: Determination of the Bending and Buckling Effect in the Stress Analysis of Shell Structures Accessible from One Side Only. TM 997, Dec. 1941.
- Hildebrand, Francis B.: The Exact Solution of Shear-Lag Problems in Flat Panels and Box Beams Assumed Rigid in the Transverse Direction. TN 894, June 1943.
- Tumarkin, S.: Methods of Stress Calculation in Rotating Disks. TM 1064, Sept. 1944.
- Shaw, Milton C. and Macks, E. Fred:
 Radial Aircraft-Engine Bearing Loads.
 I Crankpin-Bearing Loads for Engines Having Nine Cylinders Per Crankpin. ARR E5H04 (WR E-26),
 Oct. 1945.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft-Engine Bearing Loads. I - Crankpin-Bearing Loads. ARR E5H10a (WR E-67), Oct. 1945.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft-Engine Bearing Loads. II - Blade-Bearing Loads. ARR E5H10b (WR E-46), Oct. 1945.
- Bock, G.: Airscrew Gyroscopic Moments. TM 1099, Sept. 1946.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft Engine Bearing Loads. III - Main-Bearing Loads. TN 1206, Feb. 1947.
- Benscoter, Stanley U.: Effect of Partial Wing Lift in Seaplane Landing Impact. TN 1563, April 1948.
- Benscoter, Stanley U. and Gossard, Myron L.: Matrix Methods for Calculating Cantilever-Beam Deflections. TN 1827, March 1949.

TENSION

(4.7.1)

- John A. Roebling's Sons Co.: Report on Investigations of Aviation Wires and Cables, Their Fastenings and Terminal Connections. Rept. 3, 1915.
- Zahm, A. F.: Relation of Rib Spacing to Stress in Wing Planes. TN 5, May 1920.
- Rechtlich, A.: Tensile Strength of Welded Steel Tubes. First Series of Experiments. TM 445, Jan. 1928.
- Schwartz, A. Murray: Analysis of a Strut with a Single Elastic Support in the Span, with Applications to the Design of Airplane Jury-Strut Systems. I Derivation of Formulas. Bogert, Reid: II Experimental Investigation of Formulas. TN 529, May 1935.
- James, Benjamin Wylie: Principal Effects of Axial Load on Moment-Distribution Analysis of Rigid Structures. TN 534, July 1935.
- Burke, Walter F.: A Deflection Formula for Single-Span Beams of Constant Section Subjected to Combined Axial and Transverse Loads. TN 540, Sept. 1935.
- Kaul, Hans W.: The Stress Criterion of a Tension Member with Graded Flexural Stiffness. TM 804, Sept. 1936.
- Lundquist, Eugene E.: Stability of Structural Members Under Axial Load. TN 617, Oct. 1937.
- Lundquist, Eugene E.: A Method of Estimating the Critical Buckling Load for Structural Members. TN 717, July 1939.
- Müller, J.: Increase of the Specific Load Under Tension, Compression, and Buckling of Welded Steel Tubes in Airplane Construction by Suitable Treatment of Structural Steel and by Proper Design. TM 912, Oct. 1939.
- Kuhn, Paul: A Recurrence Formula for Shear-Lag Problems. TN 739, Dec. 1939.
- Brueggeman, W. C. and Roop, Frederick C.: Mechanical Properties of Flush-Riveted Joints. Rept. 701, 1940.
- Roop, Frederick C.: Effect of Aging on Mechanical Properties of Aluminum-Alloy Rivets. Rept. 724, 1941.

- Templin, R. L.; Howell, F. M. and Hartmann, E. C.: The Compressive Yield Strength of Extruded Shapes of 24-ST Aluminum Alloy. TN 793, Jan. 1941.
- Dolan, Thomas J.: Effects of Range of Stress and of Special Notches on Fatigue Properties of Aluminum Alloys Suitable for Airplane Propellers. TN 852, June 1942.
- Kuhn, Paul and Moggio, Edwin M.: Stresses Around Rectangular Cut-Outs in Skin-Stringer Panels Under Axial Loads. ARR (WR L-399), June 1942.
- Stickley, G. W.: The Fatigue Strengths of Some Wrought Aluminum Alloys. RB (WR W-83), June 1942.
- Hartmann, E. C. and Stickley, G. W.:
 Summary of Results of Tests Made by
 Aluminum Research Laboratories of
 Spot-Welded Joints and Structural
 Elements. TN 869, Nov. 1942.
- Kuhn, Paul; Duberg, John E. and Diskin, Simon H.: Stresses Around Rectangular Cut-Outs in Skin-Stringer Panels Under Axial Loads - II. ARR 3J02 (WR L-368), Oct. 1943.
- Lundquist, Eugene E. and Schuette, Evan H.: Critical Stresses for Plates. ARR 3J27 (WR L-466), Oct. 1943.
- Stowell, Elbridge Z. and Schwartz, Edward B.: Critical Stress for an Infinitely Long Flat Plate with Elastically Restrained Edges Under Combined Shear and Direct Stress. ARR 3K13 (WR L-340), Nov. 1943.
- Mebs, R. W. and McAdam, D. J., Jr.: The Influence of Plastic Deformation and of Heat Treatment on Poisson's Ratio for 18:8 Chromium-Nickel Steel. TN 928, Feb. 1944.
- Mandel, Merven W.; Crate, Harold and Schuette, Evan H.: Tests of Hydraulically Expanded Rivets. RB 4C27 (WR L-293), March 1944.
- Hoff, N. J.; Levy, Robert S. and Kempner, Joseph K.: Numerical Procedures for the Calculation of the Stresses in Monocoques. I - Diffusion of Tensile Stringer Loads in Reinforced Panels. TN 934, June 1944.
- Ballhaus, W. F. and Niles, A. S.: Simplified Truss Stability Criteria. TN 937, July 1944.
- Mandel, Merven W. and Bartone, Leonard M.: Tensile Tests of NACA and Conventional Machine-Countersunk Flush Rivets. ARR L4F06 (WR L-176), Oct. 1944.

Tension (Cont.)

- Hoff, N. J. and Kempner, Joseph: Numerical Procedures for the Calculation of the Stresses in Monocoques. II Diffusion of Tensile Stringer Loads in Reinforced Flat Panels with Cut-Outs. TN 950, Nov. 1944.
- Campbell, William R.: Performance Tests of Wire Strain Gages. I - Calibration Factors in Tension. TN 954, Nov. 1944.
- Lundquist, Eugene E.; Stowell, Elbridge Z. and Schuette, Evan H.: Principles of Moment Distribution Applied to Stability of Structures Composed of Bars or Plates. Rept. 809, 1945.
- Bruhn, Elmer F.: Tests on Thin-Walled Celluloid Cylinders to Determine the Interaction Curves Under Combined Bending, Torsion, and Compression or Tension Loads. TN 951, Jan. 1945.
- Wescoat, C. and Moore, R. L.: Bearing Strengths of 75S-T Aluminum-Alloy Sheet and Extruded Angle. TN 974, Feb. 1945.
- Bisson, Edmond E. and Kessler, Harold D.: Tensile-Strength Investigation of Cast-Iron Piston Rings of Various Strengths. ARR E5B21 (WR E-86), March 1945.
- Kempner, Joseph: Application of a Numerical Procedure to Stress Analysis of Stringer-Reinforced Panels. ARR L5C09a (WR L-11), March 1945.
- Brueggeman, W. C.; Mayer, M., Jr. and Smith, W. H.: Axial Fatigue Tests at Two Stress Amplitudes of 0.032-Inch 24S-T Sheet Specimens with a Circular Hole. TN 983, July 1945.
- Levy, Samuel; Woolley, Ruth M. and Corrick, Josephine N.: Analysis of Deep Rectangular Shear Web Above Buckling Load. TN 1009, March 1946.
- Tate, Manford B. and Rosenfeld, Samuel J.: Preliminary Investigation of the Loads Carried by Individual Bolts in Bolted Joints. TN 1051, May 1946.
- Peterson, James P.: Strain Measurements and Strength Tests of 25-Inch Diagonal-Tension Beams of 75S-T Aluminum Alloy. TN 1058, May 1946.
- Farb, Daniel: Experimental Investigation of the Stress Distribution Around Reinforced Circular Cut-Outs in Skin-Stringer Panels Under Axial Loads. TN 1241, March 1947.
- Kuhn, Paul and Peterson, James P.: Strength Analysis of Stiffened Beam Webs. TN 1364, July 1947.

- Prager, W.: On the Interpretation of Combined Torsion and Tension Tests of Thin-Wall Tubes. TN 1501, Jan. 1948.
- Marin, Joseph; Faupel, J. H.; Dutton, V. L. and Brossman, M. W.: Biaxial Plastic Stress-Strain Relations for 24S-T Aluminum Alloy. TN 1536, May 1948.
- Thomsen, E. G.; Lotze, I. and Dorn, J. E.: Fracture Strength of 75S-T Aluminum Alloy Under Combined Stress. TN 1551, July 1948.
- Thomsen, E. G.; Cornet, I.; Lotze, I. and Dorn, J. E.: Investigation on the Validity of an Ideal Theory of Elasto-Plasticity for Wrought Aluminum Alloys. TN 1552, July 1948.
- Kuhn, Paul and Peterson, James P.: Shear Lag in Axially Loaded Panels. TN 1728, Oct. 1948.
- Seide, Paul and Eppler, John F.: The Buckling of Parallel Simply Supported Tension and Compression Members Connected by Elastic Deflectional Springs. TN 1823, Feb. 1949.
- Reissner, H. and Morduchow, M.: Reinforced Circular Cut-Outs in Plane Sheets. TN 1852, April 1949.

COMPRESSION

(4.7.2)

- Natalis, Fr.: Crippling Strength of Axially Loaded Rods. TN 31, Oct. 1921.
- Schwamb, T. A. and Smith, C. S.: Tests on Built-Up Airplane Struts Having Initial Tension in Outside Fibers. TN 151, Aug. 1923.
- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength. I Deflection of Beams with Special Reference to Shear Deformations. Rept. 180, 1924.
- Lee, John G.: Tests on Duralumin Columns for Aircraft Construction. TN 208, Nov. 1924.
- Wagner, Herbert: Remarks on Airplane Struts and Girders Under Compressive and Bending Stresses. Index Values. TM 500, Feb. 1929.
- Schroeder, August: Buckling Tests of Light-Metal Tubes. TM 525, Aug. 1929.
- Newlin, J. A. and Trayer, Geo. W.: A Method of Calculating the Ultimate Strength of Continuous Beams. Rept. 347, 1930.

- Compression (Cont.)
- Trayer, George W. and March H. W.: Elastic Instability of Members Having Sections Common in Aircraft Construction. Rept. 382, 1931.
- Rhode, Richard V. and Lundquist, Eugene E.: Strength Tests on Paper Cylinders in Compression, Bending, and Shear. TN 370, April 1931.
- Swickard, Andrew E.: Metal-Truss Wing Spars. TN 383, July 1931.
- Teichmann, Alfred: Spatial Buckling of Various Types of Airplane Strut Systems. TM 647, Nov. 1931.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Compression. Rept. 473, 1933.
- Lundquist, Eugene E.: Comparison of Three Methods for Calculating the Compressive Strength of Flat and Slightly Curved Sheet and Stiffener Combinations. TN 455, March 1933.
- Schwartz, A. Murray: Analysis of a Strut with a Single Elastic Support in the Span, with Applications to the Design of Airplane Jury-Strut Systems. I Derivation of Formulas. Bogert, Reid: II Experimental Investigation of Formulas. TN 529, May 1935.
- James, Benjamin Wylie: Principal Effects of Axial Load on Moment-Distribution Analysis of Rigid Structures. TN 534, July 1935.
- Burke, Walter F.: A Deflection Formula for Single-Span Beams of Constant Section Subjected to Combined Axial and Transverse Loads. TN 540, Sept. 1935.
- Wagner, H. and Pretschner, W.: Torsion and Buckling of Open Sections. TM 784, Jan. 1936.
- Borkmann, K.: Charts for Checking the Stability of Compression Members in Trusses. TM 800, July 1936.
- Wagner, Herbert: Torsion and Buckling of Open Sections. TM 807, Oct. 1936.
- Lahde, R. and Wagner, H.: Experimental Studies of the Effective Width of Buckled Sheets. TM 814, Dec. 1936.
- Lundquist, Eugene E. and Fligg, Claude M.:
 A Theory for Primary Failure of
 Straight Centrally Loaded Columns.
 Rept. 582, 1937.
- Marguerre, Karl: The Apparent Width of the Plate in Compression. TM 833, July 1937.

- Lundquist, Eugene E.: Stability of Structural Members Under Axial Load. TN 617, Oct. 1937.
- Holt, M. and Hartmann, E. C.: Increasing the Strength of Aluminum-Alloy Columns by Prestressing. TN 618, Oct. 1937.
- Osgood, William R.: The Crinkling Strength and the Bending Strength of Round Aircraft Tubing. Rept. 632, 1938.
- Drescher, K. and Gropler, H.: Stresses in Reinforcing Rings Due to Axial Forces in Cylindrical and Conical Stressed Skins. TM 847, Jan. 1938.
- Kappus, Robert: Twisting Failure of Centrally Loaded Open-Section Columns in the Elastic Range. TM 851, March 1938.
- Radomski, B.: Compression Struts with Nonprogressively Variable Moment of Inertia. TM 861, May 1938.
- Lundquist, Eugene E. and Kroll, W. D.: Tables of Stiffness and Carry-Over Factor for Structural Members Under Axial Load. TN 652, June 1938.
- Ebner, H. and Koller, H.: Calculation of Load Distribution in Stiffened Cylindrical Shells. TM 866, June 1938.
- Kromm, A. and Marguerre, K.: Behavior of a Plate Strip Under Shear and Compressive Stresses Beyond the Buckling Limit. TM 870, July 1938.
- Wenzek, W. A.: The Effective Width of Curved Sheet After Buckling. TM 880, Nov. 1938.
- Aitchison, C. S. and Tuckerman, L. B.: The "Pack" Method for Compressive Tests of Thin Specimens of Materials Used in Thin-Wall Structures. Rept. 649, 1939.
- Osgood, William R. and Holt, Marshall: The Column Strength of Two Extruded Aluminum-Alloy H-Sections. Rept. 656, 1939.
- Ramberg, Walter; McPherson, Albert E. and Levy, Sam: Experimental Study of Deformation and of Effective Width in Axially Loaded Sheet-Stringer Panels. TN 684, Feb. 1939.
- Lundquist, Eugene E.: Local Instability of Symmetrical Rectangular Tubes Under Axial Compression. TN 686, Feb. 1939.
- Kromm, A.: The Limit of Stability of a Curved Plate Strip Under Shear and Axial Stresses. TM 898, June 1939.

- Lundquist, Eugene E.: A Method of Estimating the Critical Buckling Load for Structural Members. TN 717, July 1939.
- Barbré, R.: Stability of Rectangular Plates with Longitudinal or Transverse Stiffeners Under Uniform Compression. TM 904, Aug. 1939.
- Ramberg, Walter; McPherson, Albert E. and Levy, Sam: Compressive Tests of a Monocoque Box. TN 721, Aug. 1939.
- Lundquist, Eugene E.: Local Instability of Centrally Loaded Columns of Channel Section and Z-Section. TN 722, Aug. 1939.
- Müller, J.: Increase of the Specific Load Under Tension, Compression, and Buckling of Welded Steel Tubes in Airplane Construction by Suitable Treatment of Structural Steel and by Proper Design. TM 912, Oct. 1939.
- Nile, Alfred S.: Experimental Study of Torsional Column Failure. TN 733, Oct. 1939.
- Dunn, Louis G.: An Investigation of Sheet-Stiffener Panels Subjected to Compression Loads With Particular Reference to Torsionally Weak Stiffeners. TN 752, Feb. 1940.
- Hill, H. N.: Chart for Critical Compressive Stress of Flat Rectangular Plates. TN 773, Aug. 1940.
- Weinhold, Josef: Buckling Tests with a Spar-Rib Grill. TM 950, Sept. 1940.
- Lundquist, Eugene E. and Kotanchik,
 Joseph N.: The Effect of Initial Displacement of the Center Support on
 the Buckling of a Column Continuous
 Over Three Supports. ACR (WR
 L-256), Nov. 1940.
- Templin, R. L.; Howell, F. M. and Hartmann, E. C.: The Compressive Yield Strength of Extruded Shapes of 24-S-T Aluminum Alloy. TN 793, Jan. 1941.
- Hill, H. N.: Compression Tests of Some 17S-T Aluminum-Alloy Specimens of I Cross Section. TN 798, March 1941.
- Holt, Marshall: Tests on Stiffened Circular Cylinders. TN 800, March 1941.
- Holt, Marshall: The Effect of Methods of Testing on the Ultimate Loads Supported by Stiffened Flat Sheet Panels Under Edge Compression. TN 811, June 1941.

- Paul, D. A.; Howell, F. M. and Grieshaber,
 H. E.: Comparison of Stress-Strain
 Curves Obtained by Single-Thickness
 and Pack Methods. TN 819, Aug. 1941.
- Lundquist, Eugene E.: Preliminary Data on Buckling Strength of Curved Sheet Panels in Compression. ARR (WR E-670), Nov. 1941.
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Critical Compressive Stress for Flat Rectangular Plates Supported Along All Edges and Elastically Restrained Against Rotation Along the Unloaded Edges. Rept. 733, 1942.
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Critical Compressive Stress for Outstanding Flanges. Rept. 734, 1942.
- Lundquist Eugene E. and Stowell, Elbridge Z.: Restraint Provided a Flat Rectangular Plate by a Sturdy Stiffener Along an Edge of the Plate. Rept. 735, 1942.
- Levy, Samuel: Bending of Rectangular Plates with Large Deflections. Rept. 737, 1942.
- Levy, Samuel: Bending of Rectangular Plates with Large Deflections. TN 846, May 1942.
- Stickley, G. W.: The Fatigue Strengths of Some Wrought Aluminum Alloys. RB (WR W-83), June 1942.
- Lundquist, Eugene E.; Kotanchik, Joseph N. and Zender, George W.: A Study of the Compressive Strength of Stiffened Plywood Panels. RB, Aug. 1942.
- Levy, Samuel; McPherson, Albert E. and Ramberg, Walter: Effect of Rivet and Spot-Weld Spacing on the Strength of Axially Loaded Sheet-Stringer Panels of 24S-T Aluminum Alloy. TN 856, Aug. 1942.
- Rossman, Carl A. and Schuette, Evan H.:
 Data on Compressive Strength of Flat
 Panels with Z-Section Stiffeners. RB,
 Sept. 1942.
- Lundquist, Eugene E. and Schwartz, Edward B.: The Critical Compression Load for a Universal Testing Machine When the Specimen Is Loaded Through Knife Edges. TN 860, Sept. 1942.
- Dunn, Louis G.: On the Distribution of Stress in a Thin Plate Elastically Supported Along Two Edges at Loads Beyond the Stability Limit. TN 859, Oct. 1942.
- Lundquist, Eugene E. and Schwartz, Edward B.: A Study of General Instability of Box Beams with Truss-Type Ribs. TN 866, Nov. 1942.

- Niles, Alfred S. and Viscovich, Steven J.: Stability of Elastically Supported Columns. TN 871, Nov. 1942.
- Rafel, Norman: Effect of Normal Pressure on the Critical Compressive Stress of Curved Sheet. RB (WR L-258), Nov. 1942.
- Lundquist, Eugene E. and Schuette, Evan H.: Strength Tests of Thin-Wall Truncated Cones of Circular Section. ARR (WR L-442), Dec. 1942.
- Jacobs, Eastman N.; Lundquist, Eugene E.;
 Davidson, Milton and Houbolt, John C.:
 A Preliminary Study of the Effect of
 Compressive Load on the Fairness of a
 Low-Drag Wing Specimen with Z-Section Stiffeners. CB (WR L-527), Jan.
 1943.
- Niles, Alfred S.: Tests of Flat Panels with Four Types of Stiffeners. TN 882, Jan. 1943.
- Holt, Marshall: Tests of Aluminum-Alloy Stiffened-Sheet Specimens Cut from an Airplane Wing. TN 883, Jan. 1943.
- Levy, Samuel and Krupen, Philip: Large-Deflection Theory for End Compression of Long Rectangular Plates Rigidly Clamped Along Two Edges. TN 884, Jan. 1943.
- Kuhn, Paul and Moggio, Edwin M.: The Longitudinal Shear Strength Required in Double-Angle Columns of 24S-T Aluminum Alloy. RB 3E08 (WR L-472), May 1943.
- Levy, Samuel: Large-Deflection Theory of Curved Sheet. TN 895, May 1943.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Characteristics of Spot-Welded 24S-T Aluminum Alloy. ARR 3F16 (WR W-64) June 1943.
- Osgood, William R.: Round Heat-Treated Chromium-Molybdenum-Steel Tubing Under Combined Loads. TN 896, July 1943.
- Holt, M.: Column Strength of Magnesium Alloy AM-57S. TN 899, July 1943.
- Lundquist, Eugene E.; Rossman, Carl A. and Houbolt, John C.: A Method for Determining the Column Curve from Tests of Columns with Equal Restraints Against Rotation on the Ends. TN 903, Aug. 1943.

- Guggenheim Aeronautical Laboratory,
 California Institute of Technology:
 Some Investigations of the General Instability of Stiffened Metal Cylinders
 III Continuation of Tests of Wirebraced Specimens and Preliminary
 Tests of Sheet-Covered Specimens.
 TN 907, Aug. 1943.
- Guggenheim Aeronautical Laboratory CIT: Some Investigations of the General Instability of Stiffened Metal
 Cylinders IV Continuation of Tests
 of Sheet-Covered Specimens and
 Studies of the Buckling Phenomena of
 Unstiffened Circular Cylinders. TN
 908, Aug. 1943.
- Crate, Harold and Levin, L. Ross: Data on Buckling Strength of Curved Sheet in Compression. ARR 3J04 (WR L-557) Oct. 1943.
- Lundquist, Eugene E. and Schuette, Evan H.: Critical Stresses for Plates. ARR 3J27 (WR L-466), Oct. 1943.
- Heimerl, George J. and Roy, J. Albert:
 Preliminary Report on Tests of 24S-T
 Aluminum-Alloy Columns of Z-, Channel,
 and H-Section That Develop Local Instability. RB 3J27 (WR L-330), Oct. 1943.
- Smull, Leland K.: An Investigation of the Validity of Wang's Formula for the Critical Load for Circular Cylindrical Grids. RB 3J28, Oct. 1943.
- Kroll, W. D.; Fisher, Gordon P. and Heimerl, George J.: Charts for Calculation of the Critical Stress for Local Instability of Columns with I-, Z-, Channel, and Rectangular-Tube Section. ARR 3K04 (WR L-429), Nov. 1943.
- Stowell, Elbridge Z. and Schwartz, Edward B.: Critical Stress for an Infinitely Long Flat Plate with Elastically Restrained Edges Under Combined Shear and Direct Stress. ARR 3K13 (WR L-340), Nov. 1943.
- Kroll, W. D.: Tables of Stiffness and Carry-Over Factor for Flat Rectangular Plates Under Compression. ARR 3K27 (WR L-398), Nov. 1943.
- Russell, H. W.: Fatigue Strength and Related Characteristics of Spot-Welded Joints in 24-ST Alclad Sheet. ARR 3L01 (WR W-61), Dec. 1943.
- Davidson, Milton; Houbolt, John C.; Rafel,
 Norman and Rossman, Carl A.: Preliminary Aerodynamic and Structural
 Tests Showing the Effect of Compressive
 Load on the Fairness of a Low-Drag
 Wing Specimen with Chordwise HatSection Stiffeners. ACR 3L02 (WR L389), Dec. 1943.

- Aitchison, C. S. and Miller, James A.: A Subpress for Compressive Tests. TN 912, Dec. 1943.
- Donnell, L. H.: The Stability of Isotropic or Orthotropic Cylinders or Flat or Curved Panels, Between and Across Stiffeners, with Any Edge Conditions Between Hinged and Fixed, Under Any Combination of Compression and Shear. TN 918, Dec. 1943.
- Scott, Merit and Weber, Robert L.: Requirements for Auxiliary Stiffeners Attached to Panels Under Combined Compression and Shear. TN 921, Dec. 1943.
- Weinberger, Robert A.; Sperry, William C. and Dobrowski, Charles V.: Compressive Strength of Corrugated-Sheet-Stiffened Panels for Consolidated XB-36 Airplane. MR (WR L-588), Jan. 1944.
- Rossman, Carol A.; Bartone, Leonard M. and Dobrowski, Charles V.: Compressive Strength of Flat Panels with Z-Section Stiffeners. ARR 4B03 (WR L-499), Feb. 1944.
- Lundquist, Eugene E. and Kroll, W. D.: Extended Tables of Stiffness and Carry-Over Factor for Structural Members Under Axial Load. ARR 4B24 (WR L-255), Feb. 1944.
- Demer, L. J. and Kavanaugh, E. S.: Ovalization of Tubes Under Bending and Compression. TN 922, March 1944.
- Niles, Alfred S.: Elastic Properties of Channels with Unflanged Lightening Holes. TN 924, March 1944.
- Weinberger, Robert A.; Rossman, Carl A. and Fisher, Gordon P.: Comparison of the Compressive Strength of Panels with Alclad 24S-T81 Sheet or with Alclad 24S-T86 Sheet Riveted to Alclad 24S-T84 Hat-Section Stiffeners. MR (WR L-587), April 1944.
- Brueggeman, W. C. and Mayer, M., Jr.: Guides for Preventing Buckling in Axial Fatigue Tests of Thin Sheet-Metal Specimens. TN 931, April 1944.
- Kotanchik, Joseph N.; Weinberger, Robert A.; Zender, George W. and Neff, John, Jr.: Compressive Strength of Flat Panels with Z- and Hat-Section Stiffeners. ARR L4F01 (WR L-62), June 1944.
- Ballhaus, W. F. and Niles, A. S.: Simplified Truss Stability Criteria. TN 937, July 1944.

- Ramberg, Walter; Levy, Samuel and Fienup, Kenneth L.: Effect of Curvature on Strength of Axially Loaded Sheet-Stringer Panels. TN 944, Aug. 1944.
- Boughan, Rolla B. and Baab, George W.:
 Charts for Calculation of the Critical
 Compressive Stress for Local Instability of Idealized Web- and T-Stiffened
 Panels. ARR L4H29 (WR L-204),
 Aug. 1944.
- Schuette, Evan H.; Rafel, Norman, and Dobrowski, Charles V.: Compression Tests of Six Curved Paper-Base Plastic Panels with Outward-Acting Normal Pressure. MR (WR L-280), Sept. 1944.
- Roy, J. Albert and Schuette, Evan H.:
 The Effect of Angle of Bend Between
 Plate Elements on the Local Instability
 of Formed Z-Sections. RB L4I26 (WR
 L-268), Sept. 1944.
- Hoff, N. J. and Klein, Bertram: The Inward Bulge Type Buckling of Monocoque Cylinders. I - Calculation of the Effect upon the Buckling Stress of a Compressive Force, a Nonlinear Direct Stress Distribution, and a Shear Force. TN 938, Oct. 1944.
- Hoff, N. J.; Fuchs, S. J. and Cirillo, Adam J.:
 The Inward Bulge Type Buckling of Monocoque Cylinders. II Experimental Investigation of the Buckling in Combined Bending and Compression. TN 939, Oct. 1944.
- Levy, Samuel; Goldenberg, Daniel and Zibritosky, George: Simply Supported Long Rectangular Plate Under Combined Axial Load and Normal Pressure. TN 949, Oct. 1944.
- Dow, Norris F. and Hickman, William A.:
 Preliminary Investigation of the Relation of the Compressive Strength of
 Sheet-Stiffener Panels to the Diameter
 of Rivet Used for Attaching Stiffeners to
 Sheet. RB L4I13 (WR L-61), Nov. 1944.
- McPherson, Albert E.; Fienup, Kenneth L. and Zibritosky, George: Effect of Developed Width on Strength of Axially Loaded Curved Sheet Stringer Panels. ARR 4H08 (WR W-51), Nov. 1944.
- Zender, George W.; Schuette, Evan H. and Weinberger, Robert A.: Data on Material Properties and Panel Compressive Strength of a Plastic-Bonded Material of Glass Cloth and Canvas. TN 975, Dec. 1944.
- Lundquist, Eugene E.; Stowell, Elbridge Z. and Schuette, Evan H.: Principles of Moment Distribution Applied to Stability of Structures Composed of Bars or Plates. Rept. 809, 1945.

- Compression (Cont.)
- Schuette, Evan H.: Charts for the Minimum-Weight Design of 24S-T Aluminum-Alloy Flat Compression Panels with Longitudinal Z-Section Stiffeners. Rept. 827, 1945.
- Bruhn, Elmer F.: Tests on Thin-Walled Celluloid Cylinders to Determine the Interaction Curves Under Combined Bending, Torsion, and Compression or Tension Loads. TN 951, Jan. 1945.
- Rafel, Norman and Sandlin, Charles W., Jr.: Effect of Normal Pressure on the Critical Compressive and Shear Stress of Curved Sheet. ARR L5B10 (WR L-57), March 1945.
- Reinitzhuber, F.: Calculation of Centrally Loaded Thin-Walled Columns Above the Buckling Limit. TM 1077, April 1945.
- Kennedy, W. B., Jr. and Troxell, W. W.: Study of Compression Panel, Supported on Four Edges, Formed of Corrugated Sheet with Flat Skin on Both Sides. ARR 5B03, June 1945.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. I Panels with Close
 Stiffener Spacing That Fail by Local
 Buckling. RB L5G03 (WR L-44),
 Aug. 1945.
- Meyer, Andre J., Jr.: Elimination of Galling of Pendulum-Vibration Dampers Used in Aircraft Engines. ARR E5G31 (WR E-71), Aug. 1945.
- Campbell, William R.: Performance Tests of Wire Strain Gages. II - Calibration Factors in Compression. TN 978, Sept. 1945.
- Batdorf, S. B. and Houbolt, John C.: Critical Combinations of Shear and Transverse Direct Stress for an Infinitely Long Flat Plate with Edges Elastically Restrained Against Rotation. Rept. 847, 1946.
- Budiansky, Bernard and Hu, Pai C.: The Lagrangian Multiplier Method of Finding Upper and Lower Limits to Critical Stresses of Clamped Plates. Rept. 848, 1946.
- Libove, Charles and Stein, Manuel: Charts for Critical Combinations of Longitudinal and Transverse Direct Stress for Flat Rectangular Plates. ARR L6A05 (WR L-224), March 1946.

- Batdorf, S. B.; Stein, Manuel and Libove, Charles: Critical Combinations of Longitudinal and Transverse Direct Stress for an Infinitely Long Flat Plate with Edges Elastically Restrained Against Rotation. ARR L6A05a (WR L-49) March 1946.
- Leary, J. R. and Holt, Marshall: Column Strength of Aluminum Alloy 14S-T Extruded Shapes and Rod. TN 1027, May 1946.
- Woolley, Ruth M.; Corrick, Josephine N. and Levy, Samuel: Clamped Long Rectangular Plate Under Combined Axial Load and Normal Pressure. TN 1047, June 1946.
- McPherson, A. E.; Levy, Samuel and Zibritosky, George: Effect of Normal Pressure on Strength of Axially Loaded Sheet-Stringer Panels. TN 1041, July 1946.
- Nelson, David H.: Effect of Change in Cross Section upon Stress Distribution in Circular Shell-Supported Frames. TN 1098, July 1946.
- Hoff, N. J. and Boley, Bruno A.: The Shearing Rigidity of Curved Panels Under Compression. TN 1090, Aug. 1946.
- Hu, Pai C.; Lundquist, Eugene E. and Batdorf, S. B.: Effect of Small Deviations from Flatness on Effective Width and Buckling of Plates in Compression. TN 1124, Sept. 1946.
- Stowell, Elbridge Z.: Critical Compressive Stress for Curved Sheet Supported Along All Edges and Elastically Restrained Against Rotation Along the Unloaded Edges. RB 3107 (WR L-253), Oct. 1946.
- Hu, Pai C. and Libove, Charles: A Relaxation Procedure for the Stress Analysis of a Continuous Beam-Column Elastically Restrained Against Deflection and Rotation at the Supports. TN 1150, Oct. 1946.
- Schuette, Evan H.; Barab, Saul and McCracken, Howard L.: Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners. TN 1157, Dec. 1946.
- Kuhn, Paul; Rafel, Normal and Griffith, George E.: Stresses Around Rectangular Cut-Outs with Reinforced Coaming Stringers. TN 1176, Jan. 1947.
- Holt, Marshall and Feil, G. W.: Comparative Tests on Extruded 14S-T and Extruded 24S-T Hat-Shape Stiffener Sections. TN 1172, March 1947.

- Batdorf, S. B. and Stein, Manuel: Critical Combinations of Shear and Direct Stress for Simply Supported Rectangular Flat Plates. TN 1223, March 1947.
- Norris, Charles B.: An Analysis of the Compressive Strength of Honeycomb Cores for Sandwich Constructions. TN 1251, April 1947.
- Dow, Norris, F.; Hickman, William A. and McCracken, Howard L.: Compressive-Strength Comparisons of Panels Having Aluminum-Alloy Sheet and Stiffeners with Panels Having Magnesium-Alloy Sheet and Aluminum-Alloy Stiffeners. TN 1274, April 1947.
- Hu, Pai C. and McCulloch, James C.: The Local Buckling Strength of Lipped Z-Columns with Small Lip Width. TN 1335, June 1947.
- Batdorf, S. B.: A Simplified Method of Elastic-Stability Analysis for Thin Cylindrical Shells. I - Donnell's Equation. TN 1341, June 1947.
- Batdorf, S. B.: A Simplified Method of Elastic-Stability Analysis for Thin Cylindrical Shells. II - Modified Equilibrium Equation. TN 1342, June 1947.
- Batdorf, S. B.; Schildcrout, Murry and Stein, Manuel: Critical Stress of Thin-Walled Cylinders in Axial Compression. TN 1343, June 1947.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Combinations of Torsion and Direct Axial Stress for Thin-Walled Cylinders. TN 1345, June 1947-
- Batdorf, S. B.; Schildcrout, Murry and Stein, Manuel: Critical Combinations of Shear and Longitudinal Direct Stress for Long Plates with Transverse Curvature. TN 1347, June 1947.
- Dow, Norris F. and Hickman, William A.:
 Design Charts for Flat Compression
 Panels Having Longitudinal Extruded
 Y-Section Stiffeners and Comparison
 with Panels Having Formed Z-Section
 Stiffeners. TN 1389, Aug. 1947.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. Panels of Various Lengths
 with Close Stiffener Spacing. TN 1421,
 Sept. 1947.

- Hickman, William A. and Dow, Norris F.:
 Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners Having a Ratio of Stiffener Thickness to Skin Thickness Equal to 1.00. TN 1439, Sept. 1947.
- Ilyushin, A. A.: Stability of Plates and Shells Beyond the Proportional Limit. TM 1116, Oct. 1947.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. Panels of Various Stiffener Spacings that Fail by Local
 Buckling. TN 1467, Oct. 1947.
- Gallaher, George L. and Boughan, Rolla B.:
 A Method of Calculating the Compressive Strength of Z-Stiffened Panels that Develop Local Instability. TN 1482, Nov. 1947.
- Ilyushin, A. A.: The Elasto-Plastic Stability of Plates. TM 1188, Dec. 1947.
- Goodman, Stanley and Boyd, Evelyn: Instability of Outstanding Flanges Simply Supported at One Edge and Reinforced by Bulbs at Other Edge. TN 1433, Dec. 1947.
- Heimerl, George J.: Determination of Plate Compressive Strengths. TN 1480, Dec. 1947.
- Dow, Norris F. and Hickman, William A.: Structural Evaluation of an Extruded Magnesium-Alloy T-Stiffened Panel. TN 1518, Feb. 1948.
- Wang, Chi-Teh: Nonlinear Large-Deflection Boundary-Value Problems of Rectangular Plates. TN 1425, March 1948.
- Budiansky, Bernard; Seide, Paul and Weinberger, Robert A.: The Buckling of a Column on Equally Spaced Deflectional and Rotational Springs. TN 1519, March 1948.
- Hickman, William A. and Dow, Norris F.:
 Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners Having Four Ratios of Stiffener Thickness to Skin Thickness. TN 1553, March 1948.
- Stowell, Elbridge Z.: A Unified Theory of Plastic Buckling of Columns and Plates. TN 1556, April 1948.
- Budiansky, Bernard and Seide, Paul: Compressive Buckling of Simply Supported Plates with Transverse Stiffeners. TN 1557, April 1948.

- Heimerl, George J.: Methods of Constructing Charts for Adjusting Test Results for the Compressive Strength of Plates for Differences in Material Properties. TN 1564, April 1948.
- Thomsen, E. G.; Lotze, I. and Dorn, J. E.: Fracture Strength of 75S-T Aluminum Alloy Under Combined Stress. TN 1551, July 1948.
- Thomsen, E. G.; Cornet, I.; Lotze, I. and Dorn, J. E.: Investigation on the Validity of an Ideal Theory of Elasto-Plasticity for Wrought Aluminum Alloys. TN 1552, July 1948.
- Batdorf, S. B. and Schildcrout, Murry: Critical Axial-Compressive Stress of a Curved Rectangular Panel with a Central Chordwise Stiffener. TN 1661, July 1948.
- Dow, Norris F. and Hickman, William A.:
 Direct-Reading Design Charts for 75ST Aluminum-Alloy Flat Compression
 Panels Having Longitudinal StraightWeb Y-Section Stiffeners. TN 1640,
 Aug. 1948.
- Gomza, Alexander and Seide, Paul: Minimum-Weight Design of Simply Supported Transversely Stiffened Plates Under Compression. TN 1710, Sept. 1948.
- Gallaher, George L.: Plate Compressive Strength of FS-1h Magnesium-Alloy Sheet and a Maximum-Strength Formula for Magnesium-Alloy and Aluminum-Alloy Formed Sections. TN 1714, Oct. 1948.
- Kuhn, Paul and Peterson, James P.: Shear Lag in Axially Loaded Panels. TN 1728, Oct. 1948.
- Budiansky, Bernard: Compressive Buckling of Flat Rectangular Plates Supported by Rigid Posts. RM L8I30b, Nov. 1948.
- Dow, Norris, F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive Strength
 of Panels with Z-Section Stiffeners.
 Panels that Fail by Local Buckling and
 Have Various Values of Width-to-Thickness Ratio for the Webs of the Stiffeners.
 TN 1737, Nov. 1948.
- Budiansky, Bernard; Stein, Manuel and Gilbert, Arthur C.: Buckling of a Long Square Tube in Torsion and Compression. TN 1751, Nov. 1948.
- Dow, Norris F.; Hubka, Ralph E. and Roberts, William M.: Direct-Reading Design Charts for 24S-T Aluminum-Alloy Flat Compression Panels Having Longitudinal Straight-Web Y-Section Stiffeners. TN 1777, Jan. 1949.

- Dow, Norris F. and Hickman, William A.:
 Direct-Reading Design Charts for
 24S-T Aluminum-Alloy Flat Compression
 Panels Having Longitudinal Formed ZSection Stiffeners. TN 1778, Jan. 1949.
- Dow, Norris F. and Hickman, William A.: Comparison of the Structural Efficiency of Panels Having Straight-Web and Curved-Web Y-Section Stiffeners. TN 1787, Jan. 1949.
- Schuette, E. H.: Observation on the Maximum Average Stress of Flat Plates
 Buckled in Edge Compression. TN 1625,
 Feb. 1949.
- Heimerl, George J. and Roberts, William M.: Determination of Plate Compressive Strengths at Elevated Temperatures. TN 1806, Feb. 1949.
- Seide, Paul and Stowell, Elbridge Z.: Elastic and Plastic Buckling of Simply Supported Metalite Type Sandwich Plates in Compression. TN 1822, Feb. 1949.
- Seide, Paul and Eppler, John F.: The Buckling of Parallel Simply Supported Tension and Compression Members Connected by Elastic Deflectional Springs. TN 1823, Feb. 1949.
- Seide, Paul and Stein, Manuel: Compressive Buckling of Simply Supported Plates with Longitudinal Stiffeners. TN 1825, March 1949.
- Hickman, William A. and Dow, Norris F.:
 Data on the Compressive Strength of
 75S-T6 Aluminum-Alloy Flat Panels
 with Longitudinal Extruded Z-Section
 Stiffeners. TN 1829, March 1949.
- Pride, Richard A. and Heimerl, George J.: Plastic Buckling of Simply Supported Compressed Plates. TN 1817, April 1949.
- Schildcrout, Murry and Stein, Manuel: Critical Axial-Compressive Stress of a Curved Rectangular Panel with a Central Longitudinal Stiffener. TN 1879, May 1949.
- Seide, Paul: Compressive Buckling of Flat Rectangular Metalite Type Sandwich Plates with Simply Supported Loaded Edges and Clamped Unloaded Edges. TN 1886, May 1949.
- Libove, Charles, Ferdman, Saul and Reusch, John J.: Elastic Buckling of a Simply Supported Plate Under a Compressive Stress that Varies Linearly in the Direction of Loading. TN 1891, June 1949.
- Schildcrout, Murry and Stein, Manuel: Critical Combinations of Shear and Direct Axial Stress for Curved Rectangular Panels. TN 1928, Aug. 1949.

BENDING

(4.7.3)

- Muller-Breslau, H.: Calculation of Wing Spars. TM 35, Aug. 1921.
- McCarthy, Charles J.: Notes on the Design of Latticed Columns Subject to Lateral Loads. TN 98, May 1922.
- Katzmayr, R.: Deflection of Propeller Blades While Running. TM 145, Oct. 1922.
- Sonntag, R.: Best Rectangular and I-Shaped Cross-Sections for Airplane Wing Spars. TM 148, Oct. 1922.
- Ballenstedt, L.: Influence of Ribs on Strength of Spars. TN 139, May 1923.
- Pagon, W. Watters: General Theory of Stresses in Rigid Airship, ZR-1. TN 140, May 1923.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Pure Bending. TN 479, Dec. 1923.
- Newlin, J. A. and Trayer, G. W.: Influence of the Form of a Wooden Beam on Its Stiffness and Strength. II - Form Factors of Beams Subjected to Transverse Loading Only. Rept. 181, 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers. III - General Description of the Design. TN 200, Aug. 1924.
- Naatz, H.: Recent Researches in Airship Construction. II - Bending Stresses on an Airship in Flight. TM 276, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers. IV - Technical Methods of Design. TN 201, Sept. 1924.
- Warner, Edward P.: Wing Spar Stress Charts and Wing Truss Proportions. Rept. 214, 1925.
- Kirste, Leon: Calculation of Wing Spars of Variable Cross-Section and Linear Load. TM 305, March 1925.
- Thalau, K.: Computation of Cantilever Airplane Wings. TM 325, July 1925.
- Bromley, Stevens and Robinson, William H., Jr.: The Lateral Failure of Spars. TN 232, March 1926.
- Weick, Fred E.: Propeller Design. IV A Simple Method for Determining the Strength of Propellers. TN 238, June 1926.
- Haddon, J. D.: Metal Spars. TM 368, June 1926.

- Thalau, K.: Calculation of Combining Effects in the Structure of Airplane Wings. TM 366, June 1926.
- Blyth, J. D.: Spindled and Hollow Spars. TM 383, Oct. 1926.
- Weick, Fred E.: Determination of Propeller Deflection by Means of Static Load Tests on Models. TN 275, Jan. 1928.
- Wagner, Herbert: Remarks on Airplane Struts and Girders Under Compressive and Bending Stresses. Index Values. TM 500, Feb. 1929.
- Tellers, H.: Effect of Stressed Covering on Strength of Internal Girders of a Wing. TM 503, March 1929.
- Mathar, J.: On the Strength of Box Type Fuselages. TM 511, May 1929.
- Stieger, H. J.: Cantilever Wings for Modern Aircraft. Some Aspects of Cantilever Wing Construction with Special Reference to Weight and Torsional Stiffness. TM 538, Nov. 1929.
- Newlin, J. A. and Trayer, George W.: The Design of Airplane Wing Ribs. Rept. 345, 1930.
- Newlin, J. A. and Trayer, George W.:
 A Method of Calculating the Ultimate
 Strength of Continuous Beams.
 Rept. 347, 1930.
- Von Baranoff, A.: Determination of the Best Cross Section for a Box Beam Subjected to Bending Stresses. TM 577, Aug. 1930.
- Mathar, J.: Metal Covering of Airplanes. TM 592, Nov. 1930.
- Mossman, Ralph W. and Robinson, Russell G.: Bending Tests of Metal Monocoque Fuselage Construction. TN 357, Nov. 1930.
- Trayer, George W. and March, H. W.: Elastic Instability of Members Having Sections Common in Aircraft Construction. Rept. 382, 1931.
- Wagner, Herbert: Flat Sheet Metal Girder with Very Thin Metal Web. I General Theories and Assumptions. TM 604, Feb. 1931.
- Wagner, Herbert: Flat Sheet Metal Girders with Very Thin Metal Web. II - Sheet Metal Girders with Spars Resistant to Bending - Oblique Uprights - Stiffness. TM 605, Feb. 1931.

- Bending (Cont.)
- Wagner, Herbert: Flat Sheet Metal Girders with Very Thin Metal Web. III Sheet Metal Girders with Spars Resistant to Bending the Stress in Uprights Diagonal Tension Fields. TM 606, Feb. 1931.
- Rhode, Richard V. and Lundquist, Eugene E.: Strength Tests on Paper Cylinders in Compression, Bending, and Shear. TN 370, April 1931.
- Swickard, Andrew E.: Metal-Truss Wing Spars. TN 383, July 1931.
- Sänger, Eugen: Accurate Calculation of Multispar Cantilver and Semicantilever Wings with Parallel Webs Under Direct and Indirect Loading. TM 662, March 1932.
- Seewald, Friedrich: Determination of Stresses and Deformations of Aircraft Propellers. TM 670, May 1932.
- Sanger, Eugen: Approximate Calculation of Multispar Cantilever and Semicantilever Wings with Parallel Ribs Under Direct and Indirect Loading. TM 680, Aug. 1932.
- Kuhn, Paul: Analysis of 2-Spar Cantilever Wings with Special Reference to Torsion and Load Transference. Rept. 508, 1935.
- Cicala, Placido: The Bending of Beams with Thin Tension Flanges. TM 769, March 1935.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Combined Transverse Shear and Bending. TN 523, April 1935.
- Lundquist, Eugene E. and Burke, Walter F.: Strength Tests of Thin-Walled Duralumin Cylinders of Elliptic Section. TN 527, May 1935.
- Schwartz, A. Murray: Analysis of a Strut with a Single Elastic Support in the Span, with Applications to the Design of Airplane Jury-Strut Systems. I -Derivation of Formulas. Bogert, Reid: II - Experimental Investigation of Formulas. TN 529, May 1935.
- James, Benjamin Wylie: Principal Effects of Axial Load on Moment-Distribution Analysis of Rigid Structures. TN 534, July 1935.
- Burke, Walter F.: A Deflection Formula for Single-Span Beams of Constant Section Subjected to Combined Axial and Transverse Loads. TN 540, Sept. 1935.

- Liebers, F.: Analysis of the Three Lowest Bending Frequencies of a Rotating Propeller. TM 783, Jan. 1936.
- Kuhn, Paul: Remarks on the Elastic Axis of Shell Wings. TN 562, April 1936.
- Huber, Maximilian T.: Bending of Beams of Thin Sections. TM 793, April 1936.
- Kaul, Hans W.: The Stress Criterion of a Tension Member with Graded Flexural Stiffness. TM 804, Sept. 1936.
- Kuhn, Paul: Stress Analysis of Beams with Shear Deformation of the Flanges. Rept. 608, 1937.
- Kuhn, Paul: Strain Measurements on Small Duralumin Box Beams in Bending. TN 588, Jan. 1937.
- Wagner, H.: The Stress Distribution in Shell Bodies and Wings as an Equilibrium Problem. TM 817, Feb. 1937.
- Niles, Alfred S.; Buckwalter, John C. and Reed, Warren D.: Bending Tests of Circular Cylinders of Corrugated Aluminum-Alloy Sheet. TN 595, March 1937.
- Dumont, C. and Hill, H. N.: The Lateral Instability of Deep Rectangular Beams. TN 601, May 1937.
- Heck, O. S.: The Stability of Orthotropic Elliptic Cylinders in Pure Bending. TM 834, July 1937.
- Ebner, H.: The Strength of Shell Bodies -Theory and Practice. TM 838, Sept. 1937.
- Osgood, William R.: The Crinkling Strength and the Bending Strength of Round Aircraft Tubing. Rept. 632, 1938.
- Kuhn, Paul: Approximate Stress Analysis of Multi-Stringer Beams with Shear Deformation of the Flanges. Rept. 636, 1938.
- Schapitz, E. and Krumling, G.: Loads Tests on a Stiffened Circular Cylindrical Shell. TM 864, May 1938.
- Ebner, H. and Koller, H.: Calculation of Load Distribution in Stiffened Cylindrical Shells. TM 866, June 1938.
- Kuhn, Paul: Some Elementary Principles of Shell Stress Analysis with Notes on the Use of the Shear Center. TN 691, March 1939.
- Kuhn, Paul: Some Notes on the Numerical Solution of Shear-Lag and Mathematically Related Problems. TN 704, May 1939.

- Bending (Cont.)
- Schapitz, E.; Feller, H. and Koller, H.: Experimental and Analytical Investigation of a Monocoque Wing Model Loaded in Bending. TM 915, Oct. 1939.
- Kuhn, Paul: A Recurrence Formula for Shear-Lag Problems. TN 739, Dec. 1939.
- Dumont, C.: Stress Concentration Around an Open Circular Hole in a Plate Subjected to Bending Normal to the Plane of the Plate. TN 740, Dec. 1939.
- Kuhn, Paul: Investigations on the Incompletely Developed Plane Diagonal-Tension Field. Rept. 697, 1940.
- Ebner, H.: The Strength of Shell and Tubular Spar Wings. TM 933, Feb. 1940.
- Dumont, C. and Hill, H. N.: The Lateral Stability of Equal-Flanged Aluminum Alloy. I - Beams Subjected to Pure Bending. TN 770, Aug. 1940.
- Weinhold, Josef: Buckling Tests with a Spar-Rib Grill. TM 950, Sept. 1940.
- Winter, George: Stress Distribution in and Equivalent Width of Flanges of Wide, Thin-Wall Steel Beams. TN 784, Nov. 1940.
- Upson, Ralph H.: Structural Tests of a Stainless Steel Wing Panel by Hydrostatic Loading. TN 786, Nov. 1940.
- Newell, Joseph S. and Reissner, Eric: Shear Lag in Corrugated Sheets Used for the Chord Member of a Box Beam. TN 791, Jan. 1941.
- Fahlbusch, H. and Wegner, W.: Stress Analysis of Circular Frames. TM 999, Dec. 1941.
- Kuhn, Paul and Chiarito, Patrick T.: Shear Lag in Box Beams Methods of Analysis and Experimental Investigations. Rept. 739, 1942.
- Cordes, G.: The Design of Propeller Blade Roots. TM 1001, Jan. 1942.
- Stieda, W.: Statics of Circular-Ring Stiffeners for Monocoque Fuselages. TM 1004, Feb. 1942.
- Erlandsen, Oscar, Jr. and Mead, Lawrence M., Jr.: A Method of Shear-Lag Analysis of Box Beams for Axial Stresses, Shear Stresses, and Shear Center. ARR (WR W-33), April 1942.

- Lundquist, Eugene E. and Stowell, Elbridge Z.: Strength Tests of Thin-Walled Elliptic Duralumin Cylinders in Pure Bending and in Combined Pure Bending and Torsion. TN 851, June 1942.
- Kuhn, Paul and Chiarito, Patrick T.: The Strength of Plane Web Systems in Incomplete Diagonal Tension. ARR (WR L-367), Aug. 1942.
- Gottlieb, Robert: Tests of a Stress-Carrying Door in Compression. RB (WR L-253), Sept. 1942.
- Moore, R. L. and Holt, Marshall: Beam and Torsion Tests of Aluminum-Alloy 61S-T Tubing. TN 867, Oct. 1942.
- Chiarito, Patrick T.: Shear-Lag Tests of Two Box Beams with Flat Covers Loaded to Destruction. ARR (WR L-307), Oct. 1942.
- McPherson, Albert E.; Ramberg, Walter and Levy, Samuel: Bending Tests of a Monocoque Box. TN 873, Nov. 1942.
- Lundquist, Eugene E. and Schuette, Evan H.: Strength Tests of Thin-Wall Truncated Cones of Circular Section. ARR (WR L-442), Dec. 1942.
- Kuhn, Paul: A Procedure for the Shear-Lag Analysis of Box Beams. ARR (WR L-401), Jan. 1943.
- Niles, Alfred S.: Tests of Flat Panels with Four Types of Stiffeners. TN 882, Jan. 1943.
- Hildebrand, Francis B. and Reissner, Eric: Least-Work Analysis of the Problem of Shear Lag in Box Beams. TN 893, May 1943.
- Osgood, William R.: Round Heat-Treated Chromium-Molybdenum-Steel Tubing Under Combined Loads. TN 896, July 1943.
- Guggenheim Aeronautical Laboratory,
 California Institute of Technology:
 Some Investigations of the General
 Instability of Stiffened Metal Cylinders.
 I Review of Theory and Bibliography.
 TN 905, July 1943.
- Guggenheim Aeronautical Laboratory CIT:
 Some Investigations of the General
 Instability of Stiffened Metal Cylinders.
 II Prelimiaary Tests of Wire-Braced
 Specimens and Theoretical Studies. TN
 906, July 1943.
- Guggenheim Aeronautical Laboratory CIT:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 III Continuation of Tests of Wire-Braced Specimens and Preliminary
 Tests of Sheet-Covered Specimens.
 TN 907, Aug. 1943.

Bending (Cont.)

- Guggenheim Aeronautical Laboratory CIT:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 IV Continuation of Tests of Sheet-Covered Specimens and Studies of the Buckling Phenomena of Unstiffened Circular Cylinders. TN 908, Aug. 1943.
- Guggenheim Aeronautical Laboratory CIT:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 V Stiffened Metal Cylinders Subjected to Pure Bending. TN 909, Aug. 1943.
- Sherwood, A. W.: The Strength of Thin-Wall Cylinders of D Cross Section in Combined Pure Bending and Torsion. TN 904, Sept. 1943.
- Guggenheim Aeronautical Laboratory CIT:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 VI Stiffened Metal Cylinders Subjected to Combined Bending and Transverse Shear. TN 910, Sept. 1943.
- Kuhn, Paul and Brilmyer, Harold G.: An Approximate Method of Shear-Lag Analysis for Beams Loaded at Right Angles to the Plane of Symmetry of the Cross Section. RB 3122 (WR L-324), Sept. 1943.
- Guggenheim Aeronautical Laboratory CIT:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 VII Stiffened Metal Cylinders Subjected to Combined Bending and Torsion. TN 911, Nov. 1943.
- Chiarito, Patrick T.: Shear-Lag Tests of Two Box Beams with Corrugated Covers Loaded to Failure. ARR 4A05 (WR L-482), Jan. 1944.
- Duberg, John E.: Comparison of an Approximate and an Exact Method of Shear-Lag Analysis. ARR 4A18 (WR L-310), Jan. 1944.
- Levin, L. Ross: Tests of Beams Having Webs with Large Circular Lightening Holes. RB 4B23 (WR L-524), Feb. 1944.
- Demer, L. J. and Kavanaugh, E. S.: Ovalization of Tubes Under Bending and Compression. TN 922, March 1944.
- Niles, Alfred S.: Elastic Properties of Channels with Unflanged Lightening Holes. TN 924, March 1944.
- Ballhaus, W. F. and Niles, A. S.: Simplified Truss Stability Criteria. TN 937, July 1944.

- Hoff, N. J. and Klein, Bertram: The Inward Bulge Type Buckling of Monocoque Cylinders. I - Calculation of the Effect upon the Buckling Stress of a Compressive Force, a Nonlinear Direct Stress Distribution, and a Shear Force. TN 938, Oct. 1944.
- Hoff, N. J.; Fuchs, S. J. and Cirillo, Adam J.: The Inward Bulge Type Buckling of Monocoque Cylinders. II Experimental Investigation of the Buckling in Combined Bending and Compression. TN 939, Oct. 1944.
- Stowell, Elbridge Z.; Schwartz, Edward B.; Houbolt, John C. and Schmieden, Albert K.: Bending and Shear Stresses Developed by the Instantaneous Arrest of the Root of a Cantilever Beam with a Mass at Its Tip. MR L4K30 (WR L-586), Nov. 1944.
- Lundquist, Eugene E.; Stowell, Elbridge Z. and Schuette, Evan H.: Principles of Moment Distribution Applied to Stability of Structures Composed of Bars or Plates. Rept. 809, 1945.
- Bruhn, Elmer F.: Tests on Thin-Walled Celluloid Cylinders to Determine the Interaction Curves Under Combined Bending, Torsion, and Compression or Tension Loads. TN 951, Jan. 1945.
- Chiarito, Patrick T. and Diskin, Simon H.: Strain Measurements and Strength Tests on the Tension Side of a Box Beam with Flat Cover. ARR L5A13b (WR L-59), Feb. 1945.
- Sechler, E. E. and Frederick, J. L.: The Strength of Semielliptical Cylinders Subjected to Combined Loadings. TN 957, Feb. 1945.
- Kelley, Bartram: Response of Helicopter Rotors to Periodic Forces. ARR 5A09 (WR W-49), March 1945.
- Kempner, Joseph: Application of a Numerical Procedure to Stress Analysis of Stringer-Reinforced Panels. ARR L5C09a (WR L-11), March 1945.
- Hoff, N. J. and Klein, Bertram: The Inward Bulge Type Buckling of Monocoque Cylinders. III Revised Theory Which Considers the Shear Strain Energy. TN 968, April 1945.
- Peterson, James P.: Shear-Lag Tests of a Box Beam with a Highly Cambered Cover in Tension. ARR L5F27b (WR L-106), July 1945.
- Duberg, John E. and Luecker, Arthur R.: Comparisons of Methods of Computing Bending Moments in Helicopter Rotor Blades in the Plane of Flapping. ARR L5E23 (WR L-9), Aug. 1945.

Bending (Cont.)

- Ramberg, Walter; McPherson, A. E. and Levy, Samuel: Strength of Wing Beams under Axial and Transverse Loads. TN 988, Sept. 1945.
- Clousing, Lawrence A.; Turner, William N. and Rolls, L. Stewart: Measurements in Flight of the Pressure Distribution on the Right Wing of a P-39N-1 Airplane at Several Values of Mach Number. Rept. 859, 1946.
- Hoff, N. J.; Boley, Bruno A. and Klein, Bertram: Stresses in and General Instability of Monocoque Cylinders with Cutouts. II - Calculation of the Stresses in a Cylinder with a Symmetric Cut-out. TN 1014, April 1946.
- Hoff, N. J. and Boley, Bruno A.: Stresses in and General Instability of Monocoque Cylinders with Cut-outs. I - Experimental Investigation of Cylinders with a Symmetric Cut-out Subjected to Pure Bending. TN 1013, June 1946.
- Nelson, David H.: Effect of Change in Cross Section upon Stress Distribution in Circular Shell-Supported Frames. TN 1098, July 1946.
- Podorozhny, A. A.: Investigation of the Behavior of Thin-Walled Panels with Cutouts. TM 1094, Sept. 1946.
- Hoff, N. J.; Boley, Bruno A. and Klein, Bertram: Stresses in and General Instability of Monocoque Cylinders with Cut-outs. III - Calculation of the Buckling Load of Cylinders with Symmetric Cut-out Subjected to Pure Bending. TN 1263, May 1947.
- Schuette, Evan H. and McCulloch, James C.: Charts for the Minimum-Weight Design of Multiweb Wings in Bending. TN 1323, June 1947.
- Hoff, N. J.; Kase, Harry and Liebowitz, Harold: Interaction Between the Spars of Semimonocoque Wings with Cut-outs. TN 1324, July 1947.
- Kuhn, Paul: Deformation Analysis of Wing Structures. TN 1361, July 1947.
- Marguerre, Karl: On the Application of the Energy Method to Stability Problems. TM 1138, Oct. 1947.
- Kempner, Joseph: Recurrence Formulas and Differential Equations for Stress Analysis of Cambered Box Beams. TN 1466, Oct. 1947.
- Rolls, L. Stewart: Comparison Between Flight Measured and Calculated Span Load Distribution at High Mach Numbers. RM A7G17, Nov. 1947.

- Dunn, Louis G.: Some Investigations of the General Instability of Stiffened Metal Cylinders. IX - Criterions for the Design of Stiffened Metal Cylinders Subject to General Instability Failures. TN 1198, Nov. 1947.
- Hoff, N. J. and Klein, Bertram: Stresses in and General Instability of Monocoque Cylinders with Cutouts. V - Calculation of the Stresses in Cylinders with Side Cutout. TN 1435, Jan. 1948.
- Hoff, N. J.; Boley, Bruno A. and Viggiano, Louis R.: Stresses in and General Instability of Monocoque Cylinders with Cutouts. IV - Pure Bending Tests of Cylinders with Side Cutout. TN 1264, Feb. 1948.
- Wang, Chi-Teh: Nonlinear Large-Deflection Boundary-Value Problems of Rectangular Plates. TN 1425, March 1948.
- Hoff, N. J.; Klein, Bertram and Boley, Bruno A.: Stresses in and General Instability of Monocoque Cylinders with Cutouts. VI - Calculation of the Buckling Load of Cylinders with Side Cutout Subjected to Pure Bending. TN 1436, March 1948.
- Wang, Chi-Teh: Bending of Rectangular Plates with Large Deflections. TN 1462, April 1948.
- Hoff, N. J.; Boley, Bruno A. and Nardo, S. V.: The Inward Bulge Type Buckling of Monocoque Cylinders. IV - Experimental Investigation of Cylinders Subjected to Pure Bending. TN 1499, Sept. 1948.
- Hoff, N. J.; Klein, Bertram and Boley, Bruno A.: The Inward Bulge Type Buckling of Monocoque Cylinders. V - Revised Strain Energy Theory Which Assumes a More General Deflected Shape at Buckling. TN 1505, Sept. 1948.
- Benscoter, Stanley U.: Shear Flows in Multicell Sandwich Sections. TN 1749, Nov. 1948.
- Reissner, Eric: Small Bending and Stretching of Sandwich-Type Shells. TN 1832, March 1949.
- Reissner, H. and Morduchow, M.: Reinforced Circular Cutouts in Plane Sheets. TN 1852, April 1949.

TORSION (4.7.4)

Katzmayr, R.: Deflection of Propeller Blades While Running. TM 145, Oct. 1922.

- Torsion (Cont.)
- Otey, N. S.: Torsional Strength of Nickel Steel and Duralumin Tubing as Affected by the Ratio of Diameter to Gage Thickness. TN 189, April 1924.
- Younger, John E.: A Short Method of Calculating Torsional Stresses in an Airplane Fuselage. TN 203, Sept. 1924.
- Thalau, K.: Computation of Cantilever Airplane Wings. TM 325, July 1925.
- Weick, Fred E.: Propeller Design IV -A Simple Method for Determining the Strength of Propellers. TN 238, June 1926.
- Burgess, C. P.: The Torsional Strength of Wings. Rept. 329, 1929.
- Mathar, J.: On the Strength of Box Types Fuselages. TM 511, May 1929.
- Gabrielli, Giuseppe: Torsional Rigidity of Cantilever Wings with Constant Spar and Rib Sections. TM 520, July 1929.
- Stieger, H. J.: Cantilever Wings for Modern Aircraft. Some Aspects of Cantilever Wing Construction with Special Reference to Weight and Torsional Stiffness. TM 538, Nov. 1929.
- Trayer, George W. and March, H. W.: The Torsion of Members Having Sections Common in Aircraft Construction. Rept. 334, 1930.
- Brombacher, W. G. and Melton, E. R.: Temperature Coefficient of the Modulus of Rigidity of Aircraft Instrument Diaphragm and Spring Materials. Rept. 358, 1930.
- Wheatley, John B.: Torsion in Box Wings. TN 366, Feb. 1931.
- Lundquist, Eugene E.: Strength Tests on Thin-Walled Duralumin Cylinders in Torsion. TN 427, Aug. 1932.
- Donnell, L. H.: Stability of Thin-Walled Tubes under Torsion. Rept. 479, 1933.
- Ebner, Hans: Torsional Stresses in Box Beams with Cross Sections Partially Restrained Against Warping. TM 744, May 1934.
- Kuhn, Paul: The Torsional Stiffness of Thin Duralumin Shells Subjected to Large Torques. TN 500, July 1934.
- Lundquist, Eugene E. and Burke, Walter F.: Strength Tests of Thin-Walled Duralumin Cylinders of Elliptic Section. TN 527, May 1935.

- Kuhn, Paul: Bending Stresses due to Torsion in Cantilever Box Beams. TN 530, June 1935.
- Wagner, H. and Ballerstedt, W.: Tension Fields in Originally Curved, Thin Sheets During Shearing Stresses. TM 774, Aug. 1935.
- Kuhn, Paul: The Initial Torsional Stiffness of Shells with Interior Webs. TN 542, Sept. 1935.
- Kuhn, Paul: Remarks on the Elastic Axis of Shell Wings. TN 562, April 1936.
- Wagner, Herbert: Torsion and Buckling of Open Sections. TM 807, Oct. 1936.
- Stang, Ambrose H.; Ramberg, Walter and Back, Goldie: Torsion Tests of Tubes. Rept. 601, 1937.
- Wagner, H.: The Stress Distribution in Shell Bodies and Wings as an Equilibrium Problem. TM 817, Feb. 1937.
- Pekelsma, Robert E.: The Behavior of Thin-Wall Monocoque Cylinders under Torsional Vibration. TN 607, Aug. 1937.
- Ebner, H.: The Strength of Shell Bodies -Theory and Practice. TM 838, Sept. 1937.
- Lazzarino, Lucio: Twisting of Thin Walled Columns Perfectly Restrained at One End. TM 854, March 1938.
- Schapitz, E.: The Twisting of Thin-Walled, Stiffened Circular Cylinders. TM 878, Oct. 1938.
- Kuhn, Paul: Some Elementary Principles of Shell Stress Analysis with Notes on the Use of the Shear Center. TN 691, March 1939.
- Moore, R. L. and Paul, D. A.: Torsional Stability of Aluminum Alloy Seamless Tubing. TN 696, March 1939.
- Reinitzhuber, F.: Stresses in Single-Spar Wing Constructions with Incompletely Built-Up Ribs. TM 937, March 1940.
- Cambilargiu, E.: The Torsion of Box Beams with One Side Lacking. TM 939, April 1940.
- Paul, D. A. and Moore, R. L.: Cyclic Stress-Strain Studies of Metals in Torsion. TN 790, Dec. 1940.
- Kuhn, Paul: The Influence of Bulkhead Spacing on Bending Stresses Due to Torsion. ARR (WR L-501), May 1942.

- Torsion (Cont.)
- Lundquist, Eugene E. and Stowell, Elbridge Z.: Strength Tests of Thin-Walled Elliptic Duralumin Cylinders in Pure Bending and in Combined Pure Bending and Torsion. TN 851, June 1942.
- Moore, R. L. and Holt, Marshall: Beam and Torsion Tests of Aluminum-Alloy 61S-T Tubing. TN 867, Oct. 1942.
- Levy, Samuel; McPherson, Albert E. and Ramberg, Walter: Torsion Test of a Monocoque Box. TN 872, Nov. 1942.
- Lundquist, Eugene E. and Schuette, Evan H.: Strength Tests of Thin-Wall Truncated Cones of Circular Section. ARR (WR L-442), Dec. 1942.
- Kuhn, Paul: A Method of Calculating Bending Stresses Due to Torsion. ARR (WR L-352), Dec. 1942.
- Rafel, Norman: Effect of Normal Pressure on the Critical Shear Stress of Curved Sheet. RB (WR L-416), Jan. 1943.
- Moore, R. L.: Torsional Strength of Aluminum-Alloy Round Tubing. TN 879, Jan. 1943.
- Moore, R. L. and Paul, D. A.: Torsion Tests of 24S-T Aluminum-Alloy Noncircular Bar and Tubing. TN 885, Jan. 1943.
- Mebs, R. W. and McAdam, D. J., Jr.:
 Torsional Elastic Properties of 18:
 8 Chromium-Nickel Steel as Affected
 by Plastic Deformation and by Heat
 Treatment. TN 886, Jan. 1943.
- Hill, H. N.: Torsion of Flanged Members with Cross Sections Restrained Against Warping. TN 888, March 1943.
- Osgood, William R.: Round Heat-Treated Chromium-Molybdenum-Steel Tubing Under Combined Loads. TN 896, July 1943.
- Sherwood, A. W.: The Strength of Thin-Wall Cylinders of D Cross Section in Combined Pure Bending and Torsion. TN 904, Sept. 1943.
- Guggenheim Aeronautical Laboratory California Institute of Technology:
 Some Investigations of the General Instability of Stiffened Metal Cylinders.
 VII Stiffened Metal Cylinders Subjected to Combined Bending and Torsion. TN 911, Nov. 1943.

- Pearson, Henry A. and Aiken, William S., Jr.: Charts for the Determination of Wing Torsional Stiffness Required for Specified Rolling Characteristics or Aileron Reversal Speed. Rept. 799, 1944.
- Hildebrand, Francis B. and Reissner,
 Eric: The Influence of the Aerodynamic
 Span Effect on the Magnitude of the
 Torsional-Divergence Velocity and on
 the Shape of the Corresponding Deflection Mode. TN 926, Feb. 1944.
- Mebs, R. W. and McAdam, D. J., Jr.: The Influence of Plastic Deformation and of Heat Treatment on Poisson's Ratio for 18:8 Chromium-Nickel Steel. TN 928, Feb. 1944.
- Duberg, John E. and Brilmyer, Harold G.: Tests and Approximate Analysis of Bending Stresses Due to Torsion in a D-Section Box. ARR L4E15 (WR L-37), May 1944.
- Moore, R. L. and Wescoat, C.: Torsion Tests of Stiffened Circular Cylinders. ARR 4E31 (WR W-89), May 1944.
- Crate, Harold; Batdorf, S. B. and Baab, George W.: The Effect of Internal Pressure on the Buckling Stress of Thin-Walled Circular Cylinders Under Torsion. ARR L4E27 (WR L-67), May 1944.
- McPherson, A. E.; Goldenberg, D. and Zibritosky, G.: Torsion Test to Failure of a Monocoque Box. TN 953, Oct. 1944.
- Kuhn, Paul; Batdorf, S. B. and Brilmyer, Harold G.: Secondary Stresses in Open Box Beams Subjected to Torsion. ARR L4I23 (WR L-14), Nov. 1944.
- Bruhn, Elmer F.: Tests on Thin-Walled Celluloid Cylinders to Determine the Interaction Curves Under Combined Bending, Torsion, and Compression or Tension Loads. TN 951, Jan. 1945.
- Sechler, E. E. and Frederick, J. L.: The Strength of Semielliptical Cylinders Subjected to Combined Loadings. TN 957, Feb. 1945.
- Kuhn, Paul and Brilmyer, Harold G.:
 Stresses Near the Juncture of a
 Closed and an Open Torsion Box as
 Influenced by Bulkhead Flexibility.
 ARR L5G18 (WR L-2), Aug. 1945.
- Kuhn, Paul and Moggio, Edwin M.: Stresses Around Large Cut-Outs in Torsion Boxes. TN 1066, May 1946.
- Nelson, David H.: Effect of Change in Cross Section upon Stress Distribution in Circular Shell-Supported Frames. TN 1098, July 1946.

- Torsion (Cont.)
- Hoff, N. J. and Boley, Bruno A.: The Shearing Rigidity of Curved Panels under Compression. TN 1090, Aug. 1946.
- Moore, R. L.: Observations on the Behavior of Some Noncircular Aluminum Alloy Sections Loaded to Failure in Torsion. TN 1097, Feb. 1947.
- Dunn, Louis G.: Some Investigations of the General Instability of Stiffened Metal Cylinders. VIII - Stiffened Metal Cylinders Subjected to Pure Torsion. TN 1197, May 1947.
- Kruszewski, Edwin T.: Bending Stresses Due to Torsion in a Tapered Box Beam. TN 1297, May 1947.
- Batdorf, S. B.: A Simplified Method of Elastic-Stability Analysis for Thin Cylindrical Shells. I - Donnell's Equation. TN 1341, June 1947.
- Batdorf, S. B.: A Simplified Method of Elastic-Stability Analysis for Thin Cylindrical Shells. II - Modified Equilibrium Equation. TN 1342, June 1947.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Stress of Thin-Walled Cylinders in Torsion. TN 1344, June 1947.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Combinations of Torsion and Direct Axial Stress for Thin-Walled Cylinders. TN 1345, June 1947.
- Weigand, A.: Determination of the Stress Concentration Factor of a Stepped Shaft Stressed in Torsion by Means of Precision Strain Gauges. TM 1179, June 1947.
- Kuhn, Paul: Deformation Analysis of Wing Structures. TN 1361, July 1947.
- Dunn, Louis G.: Some Investigations of the General Instability of Stiffened Metal Cylinders. IX - Criterions for the Design of Stiffened Metal Cylinders Subject to General Instability Failures. TN 1198, Nov. 1947.
- Prager, W.: On the Interpretation of Combined Torsion and Tension Tests of Thin-Wall Tubes. TN 1501, Jan. 1948.
- Thomsen, E. G.; I. Lotze and Dorn, J. E.: Fracture Strength of '15S-T Aluminum Alloy Under Combined Stress. TN 1551, July 1948.

- Thomsen, E. G.; Cornet, I.; Lotze, I. and Dorn, J. E.: Investigation on the Validity of an Ideal Theory of Elasto-Plasticity for Wrought Aluminum Alloys. TN 1552, July 1948.
- Weigand, A.: The Problem of Torsion in Prismatic Members of Circular Segmental Cross Section. TM 1182, Sept. 1948.
- Benscoter, Stanley U.: Shear Flows in Multicell Sandwich Sections. TN 1749, Nov. 1948.
- Budiansky, Bernard; Stein, Manuel and Gilbert, Arthur C.: Buckling of a Long Square Tube in Torsion and Compression. TN 1751, Nov. 1948.

SHEAR

(4.7.5)

- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength. I Deflection of Beams with Special Reference to Shear Deformations. Rept. 180, 1924.
- Weick, Fred E.: Propeller Design. IV A Simple Method for Determining the Strength of Propellers. TN 238, June 1926.
- Trayer, George W.: The Design of Plywood Webs for Airplane Wing Beams. Rept. 344, 1929.
- Smith, George Michael: Strength in Shear of Thin Curved Sheets of Alclad. TN 343, June 1930.
- Bollenrath, F.: Wrinkling Phenomena of Thin Flat Plates Subjected to Shear Stresses. TM 601, Jan. 1931.
- Seydel, Edgar: Wrinkling of Reinforced Plates Subjected to Shear Stresses. TM 602, Jan. 1931.
- Wagner, Herbert: Flat Sheet Metal Girder with Very Thin Metal Web. Part I -General Theories and Assumptions. TM 604, Feb. 1931.
- Wagner, Herbert: Flat Sheet Metal Girders with Very Thin Metal Web. Part II -Sheet Metal Girders with Spars Resistant to Bending - Oblique Uprights -Stiffness. TM 605, Feb. 1931.
- Wagner, Herbert: Flat Sheet Metal Girders with Very Thin Metal Web. Part III -Sheet Metal Girders with Spars Resistant to Bending the Stress in Uprights -Diagonal Tension Fields. TM 606, Feb. 1931.

- Rhode, Richard V. and Lundquist, Eugene E.: Strength Tests on Paper Cylinders in Compression, Bending, and Shear. TN 370, April 1931.
- Seydel, Edgar: The Critical Shear Load of Rectangular Plates. TM 705, April 1933.
- Kuhn, Paul: A Summary of Design Formulas for Beams Having Thin Webs in Diagonal Tension. TN 469, Aug. 1933.
- Schüssler, Karl: The Behavior Under Shearing Stress of Duralumin Strip with Round, Flanged Holes. TM 756, Oct. 1934.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Combined Transverse Shear and Bending. TN 523, April 1935.
- Lahde, R. and Wagner, H.: Tests for the Determination of the Stress Condition in Tension Fields. TM 809, Nov. 1936.
- Lahde, R. and Wagner, H.: Experimental Studies of the Effective Width of Buckled Sheets. TM 814, Dec. 1936.
- Kuhn, Paul: Stress Analysis of Beams with Shear Deformation of the Flanges. Rept. 608, 1937.
- Schapitz, E.: Contributions to the Theory of Incomplete Tension Bay. TM 831, July 1937.
- Kuhn, Paul: Approximate Stress Analysis of Multi-Stringer Beams with Shear Deformation of the Flanges. Rept. 636, 1938.
- Limpert, G.: The Buckling of Curved Tension Field Girders. TM 846, Jan. 1938.
- Kromm, A. and Marguerre, K.: Behavior of a Plate Strip Under Shear and Compressive Stresses Beyond the Buckling Limit. TM 870, July 1938.
- Kuhn, Paul: Some Notes on the Numerical Solution of Shear-Lag and Mathematically Related Problems. TN 704, May 1939.
- Kromm, A.: The Limit of Stability of a Curved Plate Strip Under Shear and Axial Stresses. TM 898, June 1939.
- Brueggeman, W. C. and Roop, Frederick C.: Mechanical Properties of Flush-Riveted Joints. Rept. 701, 1940.
- Roop, Frederick C.: Effect of Aging on Mechanical Properties of Aluminum-Alloy Rivets. Rept. 724, 1941.

- Kuhn, Paul: Ultimate Stresses Developed by 24S-T Sheet in Incomplete Diagonal Tension. TN 833, Dec. 1941.
- Kuhn, Paul: Skin Stresses Around Inspection Cut-Outs. ARR, Dec. 1941.
- Glenn L. Martin Company (to the National Bureau of Standards): On 115-Degree Machine-Countersunk Joints. Mechanical Properties of Flush-Riveted Joints. Progress Report No. 1, Dec. 1941.
- Kuhn, Paul and Chiarito, Patrick T.: Shear Lag in Box Beams Methods of Analysis and Experimental Investigations. Rept. 739, 1942.
- Erlandsen, Oscar, Jr. and Mead, Lawrence M., Jr.: A Method of Shear-Lag Analysis of Box Beams for Axial Stresses, Shear Stresses, and Shear Center. ARR (WR W-33), April 1942.
- Kuhn, Paul: The Strength and Stiffness of Shear Webs with and Without Lightening Holes. ARR (WR L-402), June 1942.
- Lundquist, Eugene E. and Gottlieb, Robert:
 A Study of the Tightness and Flushness
 of Machine-Countersunk Rivets for Aircraft. RB (WR L-294), June 1942.
- Gottlieb, Robert: Tests of a Stress-Carrying Door in Shear. RB (WR L-254), Aug. 1942.
- Gottlieb, Robert and Mandel, Merven W.:
 Comparison of Tightness of 78° Machine-Countersunk Rivets Driven in
 Holes Prepared with 78° and 82°
 Countersinking Tools. RB (WR L-252),
 Sept. 1942.
- Moore, R. L.: An Investigation of the Effectiveness of Stiffeners on Shear-Resistant Plate-Girder Webs. TN 862, Sept. 1942.
- Gottlieb, Robert: Effect of Countersunk Depth on the Tightness of Two Types of Machine-Countersunk Rivet. RB (WR L-315), Oct. 1942.
- Chiarito, Patrick T.: Shear-Lag Tests of Two Box Beams with Flat Covers Loaded to Destruction. ARR (WR L-307), Oct. 1942.
- Gottlieb, Robert: Test Data on the Shear Strength of Machine Countersunk-Riveted Joints Assembled by an NACA Flush-Riveting Procedure. RB (WR L-523), Dec. 1942.
- Kuhn, Paul: The Strength and Stiffness of Shear Webs with Round Lightening Holes Having 45° Flanges. ARR (WR L-323), Dec. 1942.

- Lundquist, Eugene E. and Schuette, Evan H.: Strength Tests of Thin-Wall Truncated Cones of Circular Section. ARR (WR L-442), Dec. 1942.
- Kuhn, Paul: A Procedure for the Shear-Lag Analysis of Box Beams. ARR (WR L-401), Jan. 1943.
- Hildebrand, Francis B. and Reissner, Eric: Least-Work Analysis of the Problem of Shear Lag in Box Beams. TN 893, May 1943.
- Gottlieb, Robert and Bartone, Leonard M.: Shear Tests on Du Pont Explosive Rivets with the Countersunk Head Milled Flush After Expansion. RB 3E06 (WR L-393), May 1943.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Characteristics of Spot-Welded 24S-T Aluminum Alloy. ARR 3F16 (WR W-64), June 1943.
- Mandel, Merven W. and Schuette, Evan H.:
 Test Data on the Shear Strength of
 Joints Assembled with Round-Head and
 Brazier-Head Rivets. RB 3F21 (WR
 L-519), June 1943.
- Kuhn, Paul and Levin, L. Ross: Tests of 10-Inch 24S-T Aluminum-Alloy Shear Panels with 1-1/2-Inch Holes. RB 3F29 (WR L-500), June 1943.
- Mandel, Merven W.: Comparative Tests of the Tightness of Two Types of Flush Rivet Furnished by the Grumman Aircraft Engineering Corporation. MR (WR L-297), June 1943.
- Guggenheim Aeronautical Laboratory, California Institute of Technology: Some Investigations of the General Instability of Stiffened Metal Cylinders. VI - Stiffened Metal Cylinders Subjected to Combined Bending and Transverse Shear. TN 910, Sept. 1943.
- Lundquist, Eugene E. and Schuette, Evan H.: Critical Stresses for Plates. ARR 3J27 (WR L-466), Oct. 1943.
- Sharp, W. H.: The Effect of the Type of Specimen on the Shear Strengths of Driven Rivets. TN 916, Nov. 1943.
- Stowell, Elbridge Z.: Critical Shear Stress of an Infinitely Long Flat Plate with Equal Elastic Restraints Against Rotation Along the Parallel Edges. ARR 3K12 (WR L-476), Nov. 1943.

- Stowell, Elbridge Z. and Schwartz, Edward B.: Critical Stress for an Infinitely Long Flat Plate with Elastically Restrained Edges Under Combined Shear and Direct Stress. ARR 3K13 (WR L-340), Nov. 1943.
- Donnell, L. H.: The Stability of Isotropic or Orthotropic Cylinders or Flat or Curved Panels, Between and Across Stiffeners, with Any Edge Conditions Between Hinged and Fixed, Under Any Combination of Compression and Shear. TN 918, Dec. 1943.
- Scott, Merit and Weber, Robert L.: Requirements for Auxiliary Stiffeners Attached to Panels Under Combined Compression and Shear. TN 921, Dec. 1943.
- Crate, Harold: A Preliminary Study of Machine-Countersunk Flush Rivets Subjected to a Combined Static and Alternating Shear Load. RB 3L01 (WR L-495), Dec. 1943.
- Russell, H. W.: Fatigue Strength and Related Characteristics of Spot-Welded Joints in 24S-T Alclad Sheet. ARR 3L01 (WR W-61), Dec. 1943.
- Chiarito, Patrick T.: Shear-Lag Tests of Two Box Beams with Corrugated Covers Loaded to Failure. ARR 4A05 (WR L-482), Jan. 1944.
- Duberg, John E.: Comparison of an Approximate and an Exact Method of Shear-Lag Analysis. ARR 4A18 (WR L-310), Jan. 1944.
- Mandel, Merven W.: Comparative Tests of the Strength and Tightness of Commercial Flush Rivets of One Type and NACA Flush Rivets in Machine-Countersunk and Counterpunched Joints. RB 4B18 (WR L-297), Feb. 1944.
- Mandel, Merven W.; Crate, Harold and Schuette, Evan H.: Tests of Hydraulically Expanded Rivets. RB 4C27 (WR L-293), March 1944.
- Kuhn, Paul and Levin, L. Ross: Tests of 10-Inch 24S-T Aluminum Alloy Shear Panels with 1-1/2-Inch Holes. II -Panels Having Holes with Notched Edges. RB L4D01 (WR L-512), April 1944.
- Moggio, Edwin M. and Brilmyer, Harold G.: A Method for Estimation of Maximum Stresses Around a Small Rectangular Cut-Out in a Sheet-Stringer Panel in Shear. ARR L4D27 (WR L-64), April 1944.
- Chiarito, Patrick T.: Some Strength Tests of Stiffened Curved Sheets Loaded in Shear. RB L4D29 (WR L-259), April 1944.

- Zamboky, A. N.: Artificial Aging of Riveted Joints Made in Alclad 24S-T Sheet Using A17S-T, 17S-T, and 24S-T Rivets. TN 948, Sept. 1944.
- Hoff, N. J. and Klein, Bertram: The Inward Bulge Type Buckling of Monocoque Cylinders. I - Calculation of the Effect upon the Buckling Stress of a Compressive Force, a Nonlinear Direct Stress Distribution, and a Shear Force. TN 938, Oct. 1944.
- Stowell, Elbridge Z.; Schwartz, Edward B.; Houbolt, John C. and Schmieden, Albert K.: Bending and Shear Stresses Developed by the Instantaneous Arrest of the Root of a Cantilever Beam with a Mass at Its Tip. MR L4K30 (WR L-586), Nov. 1944.
- Kuhn, Paul and Levin, L. Ross: An Empirical Formula for the Critical Shear Stress of Curved Sheets. ARR L5A05 (WR L-58), Jan. 1945.
- Axilrod, B. M. and Jirauch, D. H.: Bonding Strengths of Adhesives at Normal and Low Temperatures. TN 964, Jan. 1945.
- Sechler, E. E. and Frederick, J. L.: The Strength of Semielliptical Cylinders Subjected to Combined Loadings. TN 957, Feb. 1945.
- Levy, Samuel; Fienup, Kenneth L. and Woolley, Ruth M.: Analysis of Square Shear Web Above Buckling Load. TN 962, Feb. 1945.
- Chiarito, Patrick T. and Diskin, Simon H.: Strain Measurements and Strength Tests on the Tension Side of a Box Beam with Flat Cover. ARR L5A13b (WR L-59), Feb. 1945.
- Kuhn, Paul and Diskin, Simon H.: On the Shear Strength of Skin-Stiffener Panels with Inspection Cut-Outs. ARR L5C01a (WR L-192), March 1945.
- Hoff, N. J. and Klein, Bertram: The Inward Bulge Type Buckling of Monocoque Cylinders. III - Revised Theory Which Considers the Shear Strain Energy. TN 968, April 1945.
- Peterson, James P.: Shear-Lag Tests of a Box Beam with a Highly Cambered Cover in Tension. ARR L5F27b (WR L-106), July 1945.
- Ramberg, Walter; McPherson, A. E. and Levy, Samuel: Strength of Wing Beams Under Axial and Transverse Loads. TN 988, Sept. 1945.

- Ruffner, Benjamin F. and Schmidt, Calvin L.: Stresses at Cut-Outs in Shear Resistant Webs as Determined by the Photoelastic Method. TN 984, Oct. 1945.
- Peterson, James P.: Strain Measurements and Strength Tests of 25-Inch Diagonal-Tension Beams with Single Uprights. ARR L5J02a (WR L-104), Nov. 1945.
- Batdorf, S. B. and Houbolt, John C.: Critical Combinations of Shear and Transverse Direct Stress for an Infinitely Long Flat Plate with Edges Elastically Restrained Against Rotation. Rept. 847, 1946.
- Hartmann, E. C. and Zamboky, A. N.:
 Comparison of Static Strengths of Machine Countersunk Riveted Joints in 24S-T, X75S-T, and Alclad 75S-T Sheet. TN 1036, May 1946.
- Podorozhny, A. A.: Investigation of the Behavior of Thin-Walled Panels with Cutouts. TM 1094, Sept. 1946.
- Hu, Pai C.; Lundquist, Eugene E. and Batdorf, S. B.: Effect of Small Deviations from Flatness on Effective Width and Buckling of Plates in Compression. TN 1124, Sept. 1946.
- Levin, L. Ross and Nelson, David H.: Effect of Rivet or Bolt Holes on the Ultimate Strength Developed by 24S-T and Alclad 75S-T Sheet in Incomplete Diagonal Tension. TN 1177, Jan. 1947.
- Stein, Manuel and Neff, John: Buckling Stresses of Simply Supported Rectangular Flat Plates in Shear. TN 1222, March 1947.
- Batdorf, S. B. and Stein, Manuel: Critical Combinations of Shear and Direct Stress for Simply Supported Rectangular Flat Plates. TN 1223, March 1947.
- Batdorf, S. B.; Stein, Manuel and Schildcrout, Murry: Critical Shear Stress of Curved Rectangular Panels. TN 1348, May 1947.
- Schuette, Evan H. and McCulloch, James C.: Charts for the Minimum-Weight Design of Multiweb Wings in Bending. TN 1323, June 1947.
- Batdorf, S. B.; Schildcrout, Murry and Stein, Manuel: Critical Shear Stress of Long Plates with Transverse Curvature. TN 1346, June 1947.
- Batdorf, S. B.; Schildcrout, Murry and Stein, Manuel: Critical Combinations of Shear and Longitudinal Direct Stress for Long Plates with Transverse Curvature. TN 1347, June 1947.

- Hoff, N. J.; Kase, Harry and Liebowitz, Harold: Interaction Between the Spars of Semimonocoque Wings with Cutouts. TN 1324, July 1947.
- Kuhn, Paul and Peterson, James P.: Strength Analysis of Stiffened Beam Webs. TN 1364, July 1947.
- Levin, L. Ross: Strength of Thin-Web Beams with Transverse Load Applied at an Intermediate Upright. TN 1544, Feb. 1948.
- Borsari, Palemede and Yu, Ai-ting: Shear Lag in a Plywood Sheet-Stringer Combination Used for the Chord Member of a Box Beam. TN 1443, March 1948.
- Budiansky, Bernard; Connor, Robert W. and Stein, Manuel: Buckling in Shear of Continuous Flat Plates. TN 1565, April 1948.
- Marin, Joseph; Faupel, J. H.; Dutton, V. L. and Brossman, M. W.: Biaxial Plastic Stress-Strain Relations for 24S-T Aluminum Alloy. TN 1536, May 1948.
- Budiansky, Bernard; Hu, Pai C. and Connor, Robert W.: Notes on the Lagrangian Multiplier Method in Elastic-Stability Analysis. TN 1558, May 1948.
- Budiansky, Bernard and Connor, Robert W.:
 Buckling Stresses of Clamped Rectangular Flat Plates in Shear. TN 1559,
 May 1948.
- Crate, Harold and Lo, Hsu: Effect of Longitudinal Stiffeners on the Buckling Load of Long Flat Plates Under Shear. TN 1589, June 1948.
- Stowell, Elbridge Z.: Critical Shear Stress of an Infinitely Long Plate in the Plastic Region. TN 1681, Aug. 1948.
- Levin, L. Ross: Ultimate Stresses Developed by 24S-T and Alclad 75S-T Aluminum-Alloy Sheet in Incomplete Diagonal Tension. TN 1756, Nov. 1948.
- Levin, L. Ross and Sandlin, Charles W., Jr.: Strength Analysis of Stiffened Thick Beam Webs. TN 1820, March 1949.
- Stein, Manuel and Fralich, Robert W.: Critical Shear Stress of Infinitely Long, Simply Supported Plate with Transverse Stiffeners. TN 1851, April 1949.
- Reissner, H. and Morduchow, M.: Reinforced Circular Cutouts in Plane Sheets. TN 1852, April 1949.

- Schildcrout, Murry and Stein, Manuel: Critical Combinations of Shear and Direct Axial Stress for Curved Rectangular Panels. TN 1928, Aug. 1949.
- Seide, Paul: Shear Buckling of Infinitely Long Simply Supported Metalite Type Sandwich Plates. TN 1910, July 1949.

CONCENTRATED

(4.7.6)

- Sänger, Eugen: Accurate Calculation of Multispar Cantilever and Semicantilever Wings with Parallel Webs Under Direct and Indirect Loading. TM 662, March 1932.
- Burke, Walter F.: Working Charts for the Stress Analysis of Elliptic Rings. TN 444, Jan. 1933.
- Miller, Roy A. and Wood, Karl D.: Formulas for the Stress Analysis of Circular Rings in a Monocoque Fuselage. TN 462, June 1933.
- Lundquist, Eugene E. and Burke, Walter F.: General Equations for the Stress Analysis of Rings. Rept. 509, 1934.
- Ebner, H.: The Strength of Shell and Tubular Spar Wings. TM 933, Feb. 1940.
- Roark, Raymond J.: Stresses and Deflections in Thin Shells and Curved Plates Due to Concentrated and Variously Distributed Loading. TN 806, May 1941.
- Fahlbusch, H. and Wegner, W.: Stress Analysis of Circular Frames. TM 999, Dec. 1941.
- Stieda, W.: Statics of Circular-Ring Stiffeners for Monocoque Fuselages. TM 1004, Feb. 1942.
- Wignot, J. E.; Combs, Henry and Ensrud, A. F.: Analysis of Circular Shell-Supported Frames. TN 929, May 1944.
- Hoff, N. J.; Levy, Robert S. and Kempner, Joseph K.: Numerical Procedures for the Calculation of the Stresses in Monocoques. I - Diffusion of Tensile Stringer Loads in Reinforced Panels. TN 934, June 1944.
- Kuhn, Paul; Duberg, John E. and Griffith, George E.: The Effect of Concentrated Loads on Flexible Rings in Circular Shells. ARR L5H23 (WR L-66), Dec. 1945.
- Gassner, E.: Strength Investigations in Aircraft Construction Under Repeated Application of the Load. TM 1087, Aug. 1946.

Concentrated (Cont.)

- Kempner, Joseph and Duberg, John E.: Charts for Stress Analysis of Reinforced Circular Cylinders Under Lateral Loads. TN 1310, May 1947.
- Kempner, Joseph: Recurrence Formulas and Differential Equations for Stress Analysis of Cambered Box Beams. TN 1466, Oct. 1947.
- Norris, C. B. and Voss, A. W.: An Improved Photoelastic Method for Determining Plane Stresses. TN 1410, Jan. 1948.
- Hoff, N. J. and Klein, Bertram: Stresses in and General Instability of Monocoque Cylinders with Cutouts. V - Calculation of the Stresses in Cylinders with Side Cutout. TN 1435, Jan. 1948.
- Hoff, N. J.; Boley, Bruno A. and Viggiano, Louis R.: Stresses in and General Instability of Monocoque Cylinders with Cutouts. IV - Pure Bending Tests of Cylinders with Side Cutout. TN 1264, Feb. 1948.
- Smith, C. B. and Voss, A. W.: Stress Distribution in a Beam of Orthotropic Material Subjected to a Concentrated Load. TN 1486, March 1948.
- Griffith, George E.: Experimental Investigation of the Effects of Plastic Flow in a Tension Panel with a Circular Hole. TN 1705, Sept. 1948.

DYNAMIC

(4.7.7)

- Pistolesi, E.: Problem of Landing. TM 33, Aug. 1921.
- Warner, Edward P.: Absorbing Landing Shocks. TM 226, Aug. 1923.
- Vogt, R.: Unsymmetrical Forces in an Airplane Cell. TM 539, Nov. 1929.
- Peck, William C.: Dynamic and Flight Tests on Rubber-Cord and Oleo-Rubber-Disk Landing Gears for an F6C-4 Airplane. Rept. 366, 1930.
- Hohenemser, K.: Impact Tests on Rubber Compression Springs for Airplane Landing Gears. TM 572, July 1930.
- Peck, William C. and Beard, Albert P.: Static, Drop, and Flight Tests on Musselman Type Airwheels. Rept. 381, 1931.
- Peck, W. C. and Beard, A. P.: Drop and Flight Tests on NY-2 Landing Gears Including Measurements of Vertical Velocities at Landing. Rept. 406, 1931.

- Pabst, Wilhelm: Landing Impact of Seaplanes. TM 624, June 1931.
- Maiorca, Salvatore: Airplane Landing Gear. TM 627, July 1931.
- Taub, Josef: Load Assumptions for the Landing Impact of Seaplanes. TM 643, Oct. 1931.
- Küssner, Hans Georg: Stresses Produced in Airplane Wings by Gusts. TM 654, Jan. 1932.
- Langer, P. and Thome, W.: Dynamic Testing of Airplane Shock-Absorbing Struts. TM 656, Jan. 1932.
- Verduzio, Rudolfo: Stresses Developed in Seaplanes While Taking Off and Landing. TM 677, July 1932.
- Hertel, Heinrich: Dynamic Breaking Tests of Airplane Parts. TM 698, Jan. 1933.
- Koning, Carel and Taub, Josef: Impact Buckling of Thin Bars in the Elastic Range Hinged at Both Ends. TM 748, June 1934.
- Taub, Josef: Impact Buckling of Thin Bars in the Elastic Range for Any End Condition. TM 749, July 1934.
- Shiskin, S.: On the Actual Loads on Airplane Landing Gears. TM 821, March 1937.
- Bleakney, William M.: Fatigue Testing of Wing Beams by the Resonance Method. TN 660, Aug. 1938.
- Kies, J. A. and Quick, G. W.: Effect of Service Stresses on Impact Resistance, X-ray Diffraction Patterns, and Microstructure of 25S Aluminum Alloy. Rept. 659, 1939.
- Axilrod, Benjamin M. and Kline, Gordon M.: Resistance of Transparent Plastics to Impact. TN 718, July 1939.
- Coleman, Robert P.: Damping Formulas and Experimental Values of Damping in Flutter Models. TN 751, Feb. 1940.
- Gallerio, Pietro: The Shock-Absorbing System of the Airplane Landing Gear. TM 938, March 1940.
- Pierce, Harold B.: Dynamic Stress Calculations for Two Airplanes in Various Gusts. ARR (WR L-484), Sept. 1941.
- Cordes, G.: The Design of Propeller Blade Roots. TM 1001, Jan. 1942.
- Dolan, Thomas J.: Effects of Range of Stress and of Special Notches on Fatigue Properties of Aluminum Alloys Suitable for Airplane Propellers. TN 852, June 1942.

Dynamic (Cont.)

- Stickley, G. W.: Improvement of Fatigue Life of an Aluminum Alloy by Overstressing. TN 857, Aug. 1942.
- Hootman, J. A. and Jones, A. R.: Results of Landing Tests of Various Airplanes. TN 863, Sept. 1942.
- Clark, Donald S.: The Influence of Impact Velocity on the Tensile Characteristics of Some Aircraft Metals and Alloys. TN 868, Oct. 1942.
- Hartmann, E. C. and Stickley, G. W.: Summary of Results of Tests Made by Aluminum Research Laboratories of Spot-Welded Joints and Structural Elements. TN 869, Nov. 1942.
- Kies, J. A. and Holshouser, W. L.: Effects of Prior Fatigue-Stressing on the Impact Resistance of Chromium-Molybdenum Aircraft Steel. TN 889, March 1943.
- Hootman, James A.: Landing Gear Design Considerations. ARR 3D30, April 1943.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Characteristics of Spot-Welded 24S-T Aluminum Alloy. ARR 3F16 (WR W-64), June 1943.
- Kreps, R. L.: Experimental Investigation of Impact in Landing on Water. TM 1046, Aug. 1943.
- Darevsky, V. M.: Determination of the Stresses Produced by the Landing Impact in the Bulkheads of a Seaplane Bottom. TM 1055, Jan. 1944.
- Brueggeman, W. C. and Mayer, M., Jr.: Guides for Preventing Buckling in Axial Fatigue Tests of Thin Sheet-Metal Speciments. TN 931, April 1944.
- Westfall, John R.: Accelerations Measured at Center of Gravity and Along Span of the Wing of a B-24D Airplane in Landing Impacts. MR (WR L-583), Aug. 1944.
- Biot, M. A. and Bisplinghoff, R. L.: Dynamic Loads on Airplane Structures During Landing. ARR 4H10 (WR W-92), Oct. 1944.
- Brueggeman, W. C.; Krupen, P. and Roop, F. C.: Axial Fatigue Tests of 10 Airplane Wing-Beam Specimens by the Resonance Method. TN 959, Dec. 1944.
- Stowell, Elbridge Z.; Schwartz, Edward B. and Houbolt, John C.: Bending and Shear Stresses Developed by the Instantaneous Arrest of the Root of a Moving Cantilever Beam. Rept. 828, 1945.

- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 3° Trim and with a 22-1/2° Angle of Dead Rise. RB L5A24 (WR L-211), Feb. 1945.
- Kelley, Bartram: Response of Helicopter Rotors to Periodic Forces. ARR 5A09 (WR W-49), March 1945.
- Stowell, Elbridge Z.; Schwartz, Edward B. and Houbolt, John C.: Bending and Shear Stresses Developed by the Instantaneous Arrest of the Root of a Cantilever Beam Rotating with Constant Angular Velocity About a Transverse Axis Through the Root. ARR L5E25 (WR L-27), June 1945.
- Mayo, Wilbur L.: Theoretical and Experimental Dynamic Loads for a Prismatic Float Having an Angle of Dead Rise of 22-1/2°. RB L5F15 (WR L-70), July 1945.
- Newell, Joseph S.: A Preliminary Survey of Existing Information Pertaining to Dynamic Loads in Aircraft Structures. CB 5H03, Aug. 1945.
- Duberg, John E. and Luecker, Arthur R.: Comparisons of Methods of Computing Bending Moments in Helicopter Rotor Blades in the Plane of Flapping. ARR L5E23, (WR L-9), Aug. 1945.
- Maney, G. A. and Wyly, L. T.: Impact Properties at Different Temperatures of Flush-Riveted Joints for Aircraft Manufactured by Various Riveting Methods. ARR 5F07 (WR W-53), Sept. 1945.
- Maney, G. A. and Wyly, L. T.: Fatigue Strength of Flush-Riveted Joints for Aircraft Manufactured by Various Riveting Methods. ARR 5H28 (WR W-82), Dec. 1945.
- Pierson, J. D.: JRM-1 Landing Impact Characteristics from Model Tests. ARR 5L03 (WR W-106), Feb. 1946.
- Batterson, Sidney A. and Stewart, Thelma: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 6° and 9° Trim and a 22-1/2° Angle of Dead Rise. RB L5K21 (WR L-69), Feb. 1946.
- Batterson, Sidney A.: Variation of Hydrodynamic Impact Loads with Flight-Path Angle for a Prismatic Float at 12° Trim and with a 22-1/2° Angle of Dead Rise. RB L5K21a (WR L-68), Feb. 1946.
- Lamb, J. J.; Albrecht, Isabelle and Axilrod, B. M.: Impact Strength and Flexural Properties of Laminated Plastics at High and Low Temperatures. TN 1954, Aug. 1946.

Dynamic (Cont.)

- Westfall, John R.: Measurements of Landing-Gear Forces and Horizontal-Tail Loads in Landing Tests of a Large Bomber-Type Airplane. TN 1140, Sept. 1946.
- Mayo, Wilbur L.: Solutions for Hydrodynamic Impact Force and Response of a Two-Mass System with an Application to an Elastic Airframe. TN 1398, Aug. 1947.
- Anderson, Roger A.: Determination of Coupled Modes and Frequencies of Swept Wings by Use of Power Series. RM L7H28, Oct. 1947.
- Benscoter, Stanley U.: Impact Theory for Seaplane Landing. TN 1437, Oct. 1947.
- Houbolt, John C. and Anderson, Roger A.: Calculation of Uncoupled Modes and Frequencies in Bending or Torsion of Nonuniform Beams. TN 1522, Feb. 1948.
- Anderson, Roger A. and Houbolt, John C.: Effect of Shear Lag on Bending Vibration of Box Beams. TN 1583, May 1948.
- Stowell, Elbridge Z.; Houbolt, John C. and Batdorf, S. B.: An Evaluation of Some Approximate Methods of Computing Landing Stresses in Aircraft. TN 1584, May 1948.
- Anderson, Roger A. and Houbolt, John C.:
 Determination of Coupled and Uncoupled
 Modes and Frequencies of Natural Vibration of Swept and Unswept Wings
 from Uniform Cantilever Modes. TN
 1747, Nov. 1948.

REPEATED DYNAMIC (4.7.7.1)

- Howell, F. M.; Stickley, G. W. and Lyst, J. O.: Effects of Surface Finish, of Certain Defects, and of Repair of Defects by Welding on Fatigue Strength of 355-T6 Sand-Castings and Effects of Prior Fatigue Stressing on Tensile Properties. TN 1464, April 1948.
- Kruszewski, Edwin T.: Effect of Transverse Shear and Rotary Inertia on the Natural Frequency of a Uniform Beam. TN 1909, July 1949.

TRANSIENT DYNAMIC (4.7.7.2)

Milwitzky, Benjamin: A Generalized
Theoretical and Experimental Investigation of the Motions and Hydrodynamic
Loads Experienced by V-Bottom Seaplanes During Step-Landing Impacts.
TN 1516, Feb. 1948.

Savitsky, Daniel: Theoretical and Experimental Wing-Tip Accelerations of a Small Flying Boat During Landing Impacts. TN 1690, Sept. 1948.

NORMAL PRESSURES

(4.7.8)

- Anon.: Impact Tests for Woods. TN 78, Feb. 1922.
- Warner, Edward P.: The Effect of Bow Stiffeners in Non-rigid Airships. TM 221, Aug. 1923.
- Verduzio, Rudolfo: Stresses Developed in Seaplanes While Taking Off and Landing. TM 677, July 1932.
- Upson, Ralph H.: Structural Tests of a Stainless Steel Wing Panel by Hydrostatic Loading. TN 786, Nov. 1940.
- Neubert, M. and Sommer, A.: Rectangular Shell Plating Under Uniformly Distributed Hydrostatic Pressure. TM 965, Dec. 1940.
- Levy, Samuel: Bending of Rectangular Plates with Large Deflections. Rept. 737, 1942.
- Levy, Samuel: Square Plate with Clamped Edges Under Normal Pressure Producing Large Deflections. Rept. 740, 1942.
- McPherson, Albert E.; Ramberg, Walter and Levy, Samuel: Normal-Pressure Tests of Circular Plates with Clamped Edges. Rept. 744, 1942.
- Ramberg, Walter; McPherson, Albert E. and Levy, Samuel: Normal-Pressure Tests of Rectangular Plates. Rept. 748, 1942.
- Levy, Samuel: Bending of Rectangular Plates with Large Deflections. TN 846, May 1942.
- Levy, Samuel: Square Plate with Clamped Edges Under Normal Pressure Producing Large Deflections. TN 847, May 1942.
- Ramberg, Walter; McPherson, Albert E. and Levy, Samuel: Normal-Pressure Tests of Rectangular Plates. TN 849, June 1942.
- Levy, Samuel and Greenman, Samuel: Bending with Large Deflection of a Clamped Rectangular Plate with Length-Width Ratio of 1.5 Under Normal Pressure. TN 853, July 1942.
- Rafel, Norman: Effect of Normal Pressure on the Critical Compressive Stress of Curved Sheet. RB (WR L-258), Nov. 1942.

Normal Pressures (Cont.)

- Wildhack, W. A. and Goerke, V. H.: The Limiting Useful Deflections of Corrugated Metal Diaphragms. TN 876, Dec. 1942.
- Rafel, Norman and Sandlin, Charles W., Jr.: Effect of Normal Pressure on the Critical Compressive and Shear Stress of Curved Sheet. ARR L5B10 (WR L-57), March 1945.
- Pian, Theodore Hsueh-Huang: Analytical Study of Transmission of Load from Skin to Stiffeners and Rings of Pressurized Cabin Structure. TN 993, Oct. 1945.
- Rafel, Norman: Effect of Normal Pressure on the Critical Shear Stress of Curved Sheet. RB (WR L-416), Jan. 1943.
- Crate, Harold; Batdorf, S. B. and Baab, George W.: The Effect of Internal Pressure on the Buckling Stress of Thin-Walled Circular Cylinders Under Torsion. ARR L4E27 (WR L-67), May 1944.
- Bradley, Kathryn H. and Axilrod, B. M.: Plastic Mountings for Aircraft Windshields. TN 936, May 1944.
- Schuette, Evan H.; Rafel, Norman and Dobrowski, Charles V.: Compression Tests of Six Curved Paper-Base Plastic Panels with Outward-Acting Normal Pressure. MR (WR L-280), Sept. 1944.

- Head, Richard M. and Sechler, Ernest E.: Normal Pressure Tests on Unstiffened Flat Plates. TN 943, Sept. 1944.
- Levy, Samuel; Goldenberg, Daniel and Zibritosky, George: Simply Supported Long Rectangular Plate Under Combined Axial Load and Normal Pressure. TN 949, Oct. 1944.
- Woolley, Ruth M.; Corrick, Josephine N. and Levy, Samuel: Clamped Long Rectangular Plate Under Combined Axial Load and Normal Pressure. TN 1047, June 1946.
- McPherson, A. E.; Levy, Samuel and Zibritosky, George: Effect of Normal Pressure on Strength of Axially Loaded Sheet-Stringer Panels. TN 1041, July 1946.
- Garvin, John B.: Flight Measurements of Aerodynamic Loads on the Horizontal Tail Surface of a Fighter-Type Airplane. TN 1483, Nov. 1947.
- Wang, Chi-Teh: Nonlinear Large-Deflection Boundary-Value Problems of Rectangular Plates. TN 1425, March 1948.
- Steinbacher, F. R. and Lo, Hsu: Determination of Bending Moments in Pressure-Loaded Rings of Arbitrary Shape When Deflections Are Considered. TN 1692, Sept. 1948.

Weight Analysis (4.8)

Everling, E.: The Increase in Dimensions of Airplanes - Weight, Area, and Loading of Wings. TN 132, March 1925.

Weight And vsis

(8.A)

of Allegans of Wings An a set

MATERIALS

(5)

Types

(5.1)

- Kittel, J. Howard: Comparison of Crystal Structures of 10 Wrought Heat-Resisting Alloys at Elevated Temperatures with Their Crystal Structures at Room Temperatures. TN 1488, Nov. 1947.
- Machlin, E. S.: Dislocation Theory of the Fatigue of Metals. TN 1489, Jan. 1948.

ALUMINUM

(5.1.1)

- Merica, Paul D.: Aluminum and Its Light Alloys. Rept. 34, 1919.
- Unger, E. and Schmidt, E.: Duralumin. TN 8, July 1920.
- Woodward, R. W.: Recent Developments in Light Alloys. TM 3, Nov. 1920.
- Gallo, Gino: Tin Soldering of Aluminum and Its Alloys. TM 45, Oct. 1921.
- Verduzio, Rudolfo: Metal Construction. TM 88, April 1922.
- Anon.: Fatigue Resistance of Duralumin. TM 135, Sept. 1922.
- Warner, Edward P.: Metal Construction of Aircraft. TM 153, Nov. 1922.
- Point, Mr.: Commercial Airplanes and Seaplanes. Thick Wings or Thin Wings. All Metal or Mixed Construction. TM 174, Dec. 1922.
- Seehase, H.: Wood Versus Metal in Airplane Construction. TM 212, June 1923.
- Otey, N. S.: Torsional Strength of Nickel Steel and Duralumin Tubing as Affected by the Ratio of Diameter to Gage Thickness. TN 189, April 1924.
- Beck, R.: Duralumin, Its Properties and Uses. TM 284, Oct. 1924.
- Lee, John G.: Tests on Duralumin Columns for Aircraft Construction. TN 208, Nov. 1924.
- Gentzcke, Chief Engineer of the S-L Airship Company: Structural Methods Employed by the Schutte-Lanz Airship Company. TM 313, May 1925.
- Meissner, K. L.: Alloys Similar to Duralumin Made in Other Countries than Germany. TM 314, May 1925.

- DeWoitine, M. E.: The Metal Construction of Airplanes - Its Advantages - Its Present State - Its Future. TM 349, Feb. 1926.
- Anon.: Metal Airplane Construction. TM 361, May 1926.
- Dornier, C.: Recent Developments in the Construction and Operation of All-Metal Airplanes. TM 378, Sept. 1926.
- From "Zeitschrift fur Flugtechnik und Motorluftschiffahrt," July 14, 1926: Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt," July 17, 1926, in Dusseldorf, Germany. TM 379, Sept. 1926.
- Nelson, Wm.: Duralumin Welding. TM 399, Feb. 1927.
- Nelson, Wm.: The Heat Treatment of Duralumin. TM 401, March 1927.
- Nelson, Wm.: The Protection of Duralumin from Corrosion. TM 404, March 1927.
- Nelson, Wm.: Duralumin and Its Corrosion. TM 408, April 1927.
- Henrickson, H. B.: Tension Experiments on Diaphragm Metals. TN 261, Aug. 1927.
- Dix, E. H., Jr.: "Alclad" A New Corrosion Resistant Aluminum Product. TN 259, Aug. 1927.
- Anon.: Metal Aircraft Construction at Vickers - Some Interesting New Forms Developed. TM 440, Dec. 1927.
- Nelson, Wm.: Duralumin Defects and Failures. TM 443, Dec. 1927.
- Wolff, E. B. and Van Ewijk, L. J. G.: Mechanical Properties of Some Materials Used in Airplane Construction. TM 448, Jan. 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. I - Practical Aspects of the Problem. TN 282, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. II - Accelerated Corrosion Tests and the Behavior of High-Strength Aluminum Alloys of Different Compositions. TN 283, April 1928.

- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. III Effect of the Previous Treatment of Sheet Material on the Susceptibility to This Type of Corrosion. TN 284, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. IV - The Use of Protective Coatings. TN 285, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. V - Results of Weather-Exposure Tests. TN 304, Feb. 1929.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. VI - The Effect of Corrosion, Accompanied by Stress on the Tensile Properties of Sheet Duralumin. TN 305, May 1929.
- Ross, Orrin E.: Curves Showing Column Strength of Steel and Duralumin Tubing. TN 306, May 1929.
- Rohrbach, Adolf: Materials and Methods of Construction in Light Structures. TM 515, May 1929.
- Tuckerman, L. B.; Petrenko, S. N. and Johnson, C. D.: Strength of Tubing Under Combined Axial and Transverse Loading. TN 307, June 1929.
- Brenner, Paul: Lautal as a Material for Airplane Construction. TM 524, Aug. 1929.
- Brombacher, W. G. and Melton, E. R.: Temperature Coefficient of the Modulus of Rigidity of Aircraft Instrument Diaphragm and Spring Materials. Rept. 358, 1930.
- Schwartz, O.: The Relation Between the Tensile Strength and the Hardness of Metals. TM 552, Feb. 1930.
- Smith, George Michael: Strength in Shear of Thin Curved Sheets of Alclad. TN 343, June 1930.
- Schrenk, Martin: Structural Details of German Light Airplanes. TM 579, Aug. 1930.
- Hartmann, E. C.: Comparison of Weights of 17ST and Steel Tubular Structural Members Used in Aircraft Construction. TN 378, May 1931.
- Brenner, Paul: Problems Involved in the Choice and Use of Materials in Airplane Construction. TM 658, Feb. 1932.
- Lundquist, Eugene E.: The Compressive Strength of Duralumin Columns of Equal Angle Section. TN 413, March 1932.

- Lundquist, Eugene E.: Strength Tests on Thin-Walled Duralumin Cylinders in Torsion. TN 427, Aug. 1932.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Pure Bending. TN 479, Dec. 1933.
- Mutchler, Willard: The Weathering of Aluminum Alloy Sheet Materials Used in Aircraft. Rept. 490, 1934.
- Matthaes, Kurt: Fatigue Strength of Airplane and Engine Materials. TM 743, April 1934.
- Lundquist, Eugene E.: Strength Tests of Thin-Walled Duralumin Cylinders in Combined Transverse Shear and Bending. TN 523, April 1935.
- Lundquist, Eugene E. and Burke, Walter F.: Strength Tests of Thin-Walled Duralumin Cylinders of Elliptic Section. TN 527, May 1935.
- Sullivan, J. E.: A Comparison of Corrosion-Resistant Steel (18 Percent Chromium 8 Percent Nickel) and Aluminum Alloy (24ST). TN 560, March 1936.
- Brueggeman, William C.: Mechanical Properties of Aluminum-Alloy Rivets. TN 585, Nov. 1936.
- Stang, Ambrose H.; Ramberg, Walter and Back, Goldie: Torsion Tests of Tubes. Rept. 601, 1937.
- Holt, M. and Hartmann, E. C.: Increasing the Strength of Aluminum-Alloy Columns by Prestressing. TN 618, Oct. 1937.
- Osgood, William R.: Column Strength of Tubes Elastically Restrained Against Rotation at the Ends. Rept. 615, 1938.
- Osgood, William R.: The Crinkling Strength and the Bending Strength of Round Aircraft Tubing. Rept. 632, 1938.
- Goodyear-Zeppelin Corporation: Preliminary Fatigue Studies on Aluminum Alloy Aircraft Girders. TN 637, Feb. 1938.
- Matthaes, K.: The Influence of Notches Under Static Stress. TM 862, May 1938.
- Osgood, William R. and Holt, Marshall: The Column Strength of Two Extruded Aluminum-Alloy H-Sections. Rept. 656, 1939.

- Kies, J. A. and Quick, G. W.: Effect of Service Stresses on Impact Resistance, X-ray Diffraction Patterns, and Microstructure of 25S Aluminum Alloy. Rept. 659, 1939.
- Mutchler, Willard: The Effect of Continuous Weathering on Light Metal Alloys Used in Aircraft. Rept. 663, 1939.
- Ramberg, Walter, McPherson, Albert E. and Levy, Sam: Compressive Tests of a Monocoque Box. TN 721, Aug. 1939.
- Gottlieb, R.; Thompson, T. M. and Witt, E. C.: Combined Beam-Column Strésses of Aluminum-Alloy Channel Sections. TN 726, Sept. 1939.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Metals Used in Aircraft. TN 736, Nov. 1939.
- Brueggeman, W. C. and Roop, Frederick C.: Mechanical Properties of Flush-Riveted Joints. Rept. 701, 1940.
- Dunn, Louis G.: An Investigation of Sheet-Stiffener Panels Subjected to Compression Loads with Particular Reference to Torsionally Weak Stiffeners. TN 752, Feb. 1940.
- Muller, W.: Creep Strength of Stabilized Wrought-Aluminum Alloys. TM 960, Nov. 1940.
- Spot Welding of Aluminum and Aluminum Alloys in the American Aircraft Industry. OCR Rept. 2, Dec. 1940.
- Paul, D. A. and Moore, R. L.: Cyclic Stress-Strain Studies of Metals in Torsion. TN 790, Dec. 1940.
- Roop, Frederick C.: Effect of Aging on Mechanical Properties of Aluminum-Alloy Rivets. Rept. 724, 1941.
- Stickley, G. W.: Effect of Alternately High and Low Repeated Stresses upon the Fatigue Strength of 25ST Aluminum Alloy. TN 792, Jan. 1941.
- Templin, R. L.; Howell, F. M. and Hartmann, E. C.: The Compressive Yield Strength of Extruded Shapes of 24ST Aluminum Alloy. TN 793, Jan. 1941.
- Hill, H. N.: Compression Tests of Some 17S-T Aluminum-Alloy Specimens of I Cross Section. TN 798, March 1941.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Aircraft Spot Welding Research. OCR Progress Report No. 1, May 1941.

- Eastwood, L. W. and Kempf, L. W.: Aluminum-Zinc-Magnesium-Copper Casting Alloys. ARR (WR W-31), July 1941.
- Moore, R. L.: Some Comparative Tests of Plain and Alclad 24S-T Sheet. TN 821, Aug. 1941.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Report on Investigation of Spot-Weld Test Specimens - Comparison of Specimen Types and Dimensions - Alclad 24-ST - I - 0.020", 0.040", 0.064" in Thickness. OCR Progress Report No. 2, Sept. 1941.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of the Surface Treatment of Alclad 24S-T in Preparation for Spot-Welding. OCR Progress Report No. 3, Sept. 1941.
- Bollenrath, F.: Factors Influencing the Fatigue Strength of Materials. TM 987, Sept. 1941.
- Hutton, J. O.: Combined Beam Column Stresses of Aluminum-Alloy Channel Sections. TN 824, Sept. 1941.
- Howell, F. M.: Variation of Properties Throughout Cross Section of Two Extruded Shapes. TN 826, Sept. 1941.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of Spot Weld Test Specimens. Part II - Comparison of SpecimentTypes and Dimensions -52S - 1/2H, 0.040" in Thickness. OCR Progress Report No. 4, Oct. 1941.
- Bürnheim, H.: Effect of Threaded and Serrated Holes on the Limited Time and Fatigue Strength of Flat Light-Alloy Strips. TM 994, Nov. 1941.
- Brueggeman, William C.: Progress Summary No. 1. Mechanical Properties of Flush-Riveted Joints Submitted by Five Airplane Manufacturers. RB (WR W-79), Feb. 1942.
- Aitchison, C. S. and Miller, James A.:
 Tensile and Pack Compressive Tests of
 Some Sheets of Aluminum Alloy, 1025
 Carbon Steel, and Chromium-Nickel
 Steel. TN 840, Feb. 1942.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Metals Used in Aircraft - II. TN 842, Feb. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of the Spot-Welding of Aluminum Alloys Using Condenser-Discharge Equipment Provided by the Taylor-Winfield Corporation. OCR Progress Report No. 5, March 1942.

- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Examination of Spot Welds in Alclad 24S-T. OCR Progress Report No. 6, March 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of the Spot Welding of Aluminum Alloys Using Magnetic Energy Storage Equipment Provided by the Sciaky Brothers. OCR Progress Report No. 7, May 1942.
- Hartmann, E. C. and Sharp, W. H.: A Summary of Results of Various Investigations of the Mechanical Properties of Aluminum Alloys at Low Temperatures. TN 843, May 1942.
- Stickley, G. W.: The Fatigue Strengths of Some Wrought Aluminum Alloys. RB (WR W-83), June 1942.
- Dolan, Thomas J.: Effects of Range of Stress and of Special Notches on Fatigue Properties of Aluminum Alloys Suitable for Airplane Propellers. TN 852, June 1942.
- Walton, C. J. and Keller, F.: Procedure Used at Aluminum Research Laboratories for Determining Type of Attack in Some Aluminum Alloys. ARR (WR W-34), Aug. 1942.
- Templin, R. L. and Fogwell, J. W.: Design of Tools for Press-Countersinking or Dimpling 0.040-Inch-Thick 24S-T Sheet. TN 854, Aug. 1942.
- Levy, Samuel; McPherson, Albert E. and Ramberg, Walter: Effect of Rivet and Spot-Weld Spacing on the Strength of Axially Loaded Sheet-Stringer Panels of 24S-T Aluminum Alloy. TN 856, Aug. 1942.
- Rossman, Carl A. and Schuette, Evan H.:
 Data on Compressive Strength of Flat
 Panels with Z-Section Stiffeners. RB,
 Sept. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: The Spot Welding of Dissimilar Thicknesses of Alclad 24S-T. OCR Progress Report No. 8, Sept. 1942.
- Moore, R. L.: An Investigation of the Effectiveness of Stiffeners on Shear-Resistant Plate-Girder Webs. TN 862, Sept. 1942.
- Moore, R. L. and Holt, Marshall: Beam and Torsion Tests of Aluminum-Alloy 61S-T Tubing. TN 867, Oct. 1942.
- Clark, Donald S.: The Influence of Impact Velocity on the Tensile Characteristics of Some Aircraft Metals and Alloys. TN 868, Oct. 1942.

- Hartmann, E. C. and Stickley, G. W.: The Direct-Stress Fatigue Strength of 17S-T Aluminum Alloy Throughout the Range from 1/2 to 500,000,000 Cycles of Stress. TN 865, Nov. 1942.
- Hartmann, E. C. and Stickley, G. W.: Summary of Results of Tests Made by Aluminum Research Laboratories of Spot-Welded Joints and Structural Elements. TN 869, Nov. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of Current Wave Form for Spot-Welding Alclad 24S-T, 0.020 Inch in Thickness. OCR Progress Report No. 9, Nov. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Aircraft Spot-Welding Research. The Surface Treatment of Alclad 24S-T Prior to Spot Welding. OCR Progress Report No. 10, Dec. 1942.
- Paul, D. A.: An Exploration of the Longitudinal Tensile and Compressive Properties Throughout an Extruded Shape of 24S-T Aluminum Alloy. TN 877, Dec. 1942.
- Moore, R. L.: Torsional Strength of Aluminum-Alloy Round Tubing. TN 879, Jan. 1943.
- Niles, Alfred S.: Tests of Flat Panels with Four Types of Stiffeners. TN 882, Jan. 1943.
- Moore, R. L. and Paul, D. A.: Torsion Tests of 24S-T Aluminum-Alloy Noncircular Bar and Tubing. TN 885, Jan. 1943.
- Russell, H. W. and Jackson, L. R.: Progress Report on Fatigue of Spot-Welded Aluminum. ARR (WR W-38), Feb. 1943.
- Hess, W. F.; Wyant, R. A.; Averbach, B.
 L. and Winsor, F. J.: An Investigation
 of Electrode-Pressure Cycles and Current Wave Forms for Spot-Welding
 Alclad 24S-T. OCR Progress Report
 No. 11, April 1943.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: The Surface Treatment at Room Temperature of Aluminum Alloys for Spot Welding. OCR Progress Report No. 12, April 1943.
- Kuhn, Paul and Moggio, Edwin M.: The Longitudinal Shear Strength Required in Double-Angle Columns of 24S-T Aluminum Alloy. RB 3E08 (WR L-472), May 1943.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Characteristics of Spot-Welded 24S-T Aluminum Alloy. ARR 3F16 (WR W-64), June 1943.

- Mandel, Merven W.: Comparative Tests of the Tightness of Two Types of Flush Rivet Furnished by the Grumman Aircraft Engineering Corporation. MR (WR L-297), June 1943.
- Kuhn, Paul and Levin, L. Ross: Tests of 10-Inch 24S-T Aluminum-Alloy Shear Panels with 1-1/2-Inch Holes. RB 3F29 (WR L-500), June 1943.
- Ramberg, Walter and Osgood, William R.: Description of Stress-Strain Curves by Three Parameters. TN 902, July 1943.
- Moore, R. L. and Wescoat, C.: Bearing Strength of Some Wrought-Aluminum Alloys. TN 901, Aug. 1943.
- Kotanchik, Joseph N.; Woods, Walter and Zender, George W.: The Effect of Artificial Aging on the Tensile Properties of Alclad 24S-T and 24S-T Aluminum Alloy. RB 3H23 (WR L-257), Aug. 1943.
- Hess, W. F.; Wyant, R. A.; Averbach, B. L. and Winsor, F. J.: On Aircraft Spot-Welding Research. Some Observations of Spot-Weld Consistency in Aluminum Alloys. OCR Progress Report No. 13, Oct. 1943.
- Crate, Harold and Levin, L. Ross: Data on Buckling Strength of Curved Sheet in Compression. ARR 3J04 (WR L-557), Oct. 1943.
- Heimerl, George J. and Roy, J. Albert:
 Preliminary Report on Tests of 24S-T
 Aluminum-Alloy Columns of Z-, Channel, and H-Section that Develop Local
 Instability. RB 3J27 (WR L-333), Oct.
 1943.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: On Aircraft Spot-Welding Research. An Investigation of the Effect of Spot Welding on the Sheet Efficiency of Aluminum Alloy 24S-T Under Static Load. OCR Progress Report No. 14, Oct. 1943.
- Dolan, Thomas J.: Certain Mechanical Strength Properties of Aluminum Alloys 25S-T and X76S-T. TN 914, Oct. 1943.
- Sharp, W. H.: The Effect of the Type of Specimen on the Shear Strengths of Driven Rivets. TN 916, Nov. 1943.
- Russell, H. W.; Gillett, H. W.; Jackson, L. R. and Foley, G. M.: The Effect of Surface Finish on the Fatigue Performance of Certain Propeller Materials. TN 917, Dec. 1943.

- Moore, R. L. and Wescoat, C.: Bearing Strengths of Bare and Alclad XA75S-T and 24S-T81 Aluminum Alloy Sheet. TN 920, Dec. 1943.
- Russell, H. W.: Fatigue Strength and Related Characteristics of Spot-Welded Joints in 24S-T Alclad Sheet. ARR 3L01 (WR W-61), Dec. 1943.
- Hess, W. F. and Nippes, E. F., Jr.: A Method for Welding Sheet Aluminum to SAE 4140 Steel. ARR 4A01 (WR W-102), Jan. 1944.
- Rossman, Carl A.; Bartone, Leonard M. and Dobrowski, Charles V.: Compressive Strength of Flat Panels with Z-Section Stiffeners. ARR 4B03 (WR L-499), Feb. 1944.
- Schuette, Evan H.; Bartone, Leonard M. and Mandel, Merven W.: Tensile Tests of Round-Head, Flat-Head, and Brazier-Head Rivets. TN 930, March 1944.
- Weinberger, Robert A.; Rossman, Carl A. and Fisher, Gordon P.: Comparison of the Compressive Strength of Panels with Alclad 24S-T81 Sheet or with Alclad 24S-T86 Sheet Riveted to Alclad 24S-T84 Hat-Section Stiffeners. MR (WR L-587), April 1944.
- Kuhn, Paul and Levin, L. Ross: Tests of 10-Inch 24S-T Aluminum Alloy Shear Panels with 1-1/2-Inch Holes. II -Panels Having Holes with Notched Edges. RB L4D01 (WR L-512), April 1944.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Joints in 24S-T Alclad Sheet. ARR 4E30 (WR W-63), May 1944.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strength of Extruded XB75S-T Aluminum Alloy. RB L4E26, May 1944.
- Kotanchik, Joseph N.; Weinberger, Robert A.; Zender, George W. and Neff, John, Jr.: Compressive Strength of Flat Panels with Z- and Hat-Section Stiffeners. ARR L4F01 (WR L-62), June 1944.
- Hartmann, E. C. and Wescoat, C.: The Shear Strength of Aluminum Alloy Driven Rivets as Affected by Increasing D/t Ratios. TN 942, July 1944.
- Hess, W. F.; Wyant, R. A.; Winsor, F. J. and Cook, H. C.: On Aircraft Spot-Welding Research. An Investigation of the Fatigue Strength of Spot Welds in the Aluminum Alloy Alclad 24S-T. OCR Progress Report No. 15, Aug. 1944.

- Ramberg, Walter; Levy, Samuel and Fienup, Kenneth L.: Effect of Curvature on Strength of Axially Loaded Sheet-Stringer Panels. TN 944, Aug. 1944.
- Head, Richard M. and Sechler, Ernest E.: Normal Pressure Tests on Unstiffened Flat Plates. TN 943, Sept. 1944.
- Zamboky, A. N.: Artificial Aging of Riveted Joints Made in Alclad 24S-T Sheet Using A17S-T, 17S-T, and 24S-T Rivets. TN 948, Sept. 1944.
- Hartmann, E. C.; Lyst, J. O. and Andrews, H. J.: Fatigue Tests of Riveted Joints Progress Report of Tests of 17S-T and 53S-T Joints. ARR 4I15 (WR W-55), Sept. 1944.
- Brueggeman, W. C.; Mayer, M., Jr. and Smith, W. H.: Axial Fatigue Tests at Zero Mean Stress of 24S-T Aluminum-Alloy Sheet with and Without a Circular Hole. TN 955, Nov. 1944.
- McPherson, Albert E.; Fienup, Kenneth L. and Zibritosky, George: Effect of Developed Width on Strength of Axially Loaded Curved Sheet Stringer Panels. ARR 4H08 (WR W-51), Nov. 1944.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Aircraft Joints. I Comparison of Spot-Weld and Rivet Patterns in 24S-T Alclad Sheet Comparison of 24S-T Alclad and 75S-T Alclad. ARR 4F01 (WR W-56), Dec. 1944.
- Schuette, Evan H.: Charts for the Minimum-Weight Design of 24S-T Aluminum-Alloy Flat Compression Panels with Longitudinal Z-Section Stiffeners. Rept. 827, 1945.
- Axilrod, B. M. and Jirauch, D. H.: Bonding Strengths of Adhesives at Normal and Low Temperatures. TN 964, Jan. 1945.
- Templin, R. L. and Hartmann, E. C.: The Elastic Constants for Wrought Aluminum Alloys. TN 966, Jan. 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: On Aircraft Spot-Welding Research. Further Investigation of the Effect of Spot Welds on the Sheet Efficiency of Alclad 24S-T. OCR Progress Report No. 16, Feb. 1945.
- Andrews, H. J. and Holt, M.: Fatigue Tests on 1/8-Inch Aluminum Alloy Rivets. TN 971, Feb. 1945.

- Wescoat, C. and Moore, R. L.: Bearing Strengths of 75S-T Aluminum-Alloy Sheet and Extruded Angle. TN 974, Feb. 1945.
- Kennedy, W. B., Jr. and Troxell, W. W.: Study of Compression Panel, Supported on Four Edges, Formed of Corrugated Sheet with Flat Skin on Both Sides. ARR 5B03, June 1945.
- Lundquist, Eugene E.; Schuette, Evan H.;
 Heimerl, George J. and Roy, J. Albert:
 Column and Plate Compressive
 Strengths of Aircraft Structural Materials 24S-T Aluminum-Alloy Sheet.
 ARR L5F01 (WR L-190), June 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials 17S-T Aluminum-Alloy Sheet. ARR L5F08 (WR L-20), June 1945.
- Moore, R. L. and Wescoat, C.: Bearing Strengths of 24S-T Aluminum Alloy Plates. TN 981, June 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 75S-T Aluminum Alloy. ARR L5F08a (WR L-173), July 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 24S-T Aluminum Alloy. ARR L5F08b (WR L-32), July 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: On Aircraft Spot-Welding Research. The Spot Welding of Ten Aluminum Alloys in the 0.040-Inch Gage. OCR Progress Report No. 18, July 1945.
- Brueggeman, W. C.; Mayer, M., Jr. and Smith, W. H.: Axial Fatigue Tests at Two Stress Amplitudes of 0.032-Inch 24S-T Sheet Specimens with a Circular Hole. TN 983, July 1945.
- Moore, R. L. and Hill, H. N.: Comparative Fatigue Tests of Riveted Joints of Alclad 24S-T, Alclad 24S-T81, Alclad 24S-RT, Alclad 24S-T86, and Alclad 75S-T Sheet. RB 5F11 (WR W-76), Aug. 1945.
- Ramberg, Walter; McPherson, A. E. and Levy, Samuel: Strength of Wing Beams Under Axial and Transverse Loads. TN 988, Sept. 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: On Aircraft Spot-Welding Research. The Spot-Welding of Multiple Thicknesses of 0.040-Inch Alclad 24S-T. OCR Progress Report No. 17, Sept. 1945.

- Heimerl, George J. and Fay, Douglas P.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded R303-T Aluminum Alloy. ARR L5H04 (WR L-33), Oct. 1945.
- Jackson, L. R. and Grover, H. J.: The Application of Data on Strength Under Repeated Stresses to the Design of Aircraft. ARR 5H27 (WR W-91), Oct. 1945.
- Bennett, J. A.: Effect of Fatigue-Stressing Short of Failure on Some Typical Aircraft Metals. TN 992, Oct. 1945.
- Maney, G. A. and Wyly, L. T.: Fatigue Strength of Flush-Riveted Joints for Aircraft Manufactured by Various Riveting Methods. ARR 5H28 (WR W-82), Dec. 1945.
- Holt, Marshall and Leary, J. H.: The Column Strength of Aluminum Alloy 75 S-T Extruded Shapes. TN 1004, Jan. 1946.
- Miller, James A.: Stress-Strain and Elongation Graphs for Aluminum Alloy R301 Sheet. TN 1010, Feb. 1946.
- Heimerl, George J. and Niles, Donald E.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 14S-T Aluminum Alloy. ARR L6C19 (WR L-284), May 1946.
- Leary, J. R. and Holt, Marshall: Column Strength of Aluminum Alloy 14S-T Extruded Shapes and Rod. TN 1027, May 1946.
- Hartmann, E. C. and Zamboky, A. N.: Comparison of Static Strengths of Machine Countersunk Riveted Joints in 24S-T, X75S-T, and Alclad 75S-T Sheet. TN 1036, May 1946.
- Heimerl, George J. and Woods, Walter: Effect of Brake Forming on the Strength of 24S-T Aluminum-Alloy Sheet. TN 1072, May 1946.
- McPherson, A. E.; Levy, Samuel and Zibritosky, George: Effect of Normal Pressure on Strength of Axially Loaded Sheet-Stringer Panels. TN 1041, July 1946.
- Graf, L.: On the Problem of Stress Corrosion. TM 1090, July 1946.
- Hoff, N. J. and Boley, Bruno A.: The Shearing Rigidity of Curved Panels Under Compression. TN 1090, Aug. 1946.

- Macks, E. Fred and Shaw, Milton C.: Load Capacity of Aluminum-Alloy Crankpin Bearings as Determined in a Centrifugal Bearing Test Machine. TN 1108, Aug. 1946.
- Heimerl, George J. and Woods, Walter: Increasing the Compressive Strength of 24S-T Aluminum-Alloy Sheet by Flexure Rolling. TN 1119, Aug. 1946.
- Crate, Harold; Ochiltree, David W. and Graves, Walter T.: Effect of Ratio of Rivet Pitch to Rivet Diameter on the Fatigue Strength of Riveted Joints of 24S-T Aluminum-Alloy Sheet. TN 1125, Sept. 1946.
- Schuette, Evan H.; Barab, Saul and McCracken, Howard L.: Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners. TN 1157, Dec. 1946.
- Woods, Walter and Heimerl, George J.: Effect of Brake Forming in Various Tempers on the Strength of Alclad 75S-T Aluminum-Alloy Sheet. TN 1162, Jan. 1947.
- Levin, L. Ross and Nelson, David H.: Effect of Rivet or Bolt Holes on the Ultimate Strength Developed by 24S-T and Alclad 75S-T Sheet in Incomplete Diagonal Tension. TN 1177, Jan. 1947.
- Moore, R. L.: Observations on the Behavior of Some Noncircular Aluminum Alloy Sections Loaded to Failure in Torsion. TN 1097, Feb. 1947.
- Holt, Marshall and Feil, G. W.: Comparative Tests on Extruded 14S-T and Extruded 24S-T Hat-Shape Stiffener Sections. TN 1172, March 1947.
- Schuette, Evan H. and McCulloch, James C.: Charts for the Minimum-Weight Design of Multiweb Wings in Bending. TN 1323, June 1947.
- Dow, Norris F. and Hickman, William A.:
 Effect of Variation in Diameter and
 Pitch of Rivets on Compressive
 Strength of Panels with Z-Section
 Stiffeners. Panels of Various Lengths
 with Close Stiffener Spacing. TN 1421,
 Sept. 1947.
- Hickman, William A. and Dow, Norris F.:
 Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners
 Having a Ratio of Stiffener Thickness to Skin Thickness Equal to 1.00. TN 1439, Sept. 1947.

- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: The Spot Welding of Dissimilar Aluminum Alloys in the 0.040-Inch Thickness. TN 1322, Oct. 1947.
- Dow, Norris F. and Hickman, William A .: Effect of Variation in Diameter and Pitch of Rivets on Compressive Strength of Panels with Z-Section Stiffeners. Panels of Various Stiffener Spacings that Fail by Local Buckling. TN 1467, Oct. 1947.
- Miller, James A.: Stress-Strain and Elon-gation Graphs for Alclad Aluminum-Alloy 75S-T Sheet. TN 1385, Nov.
- Hess, W. F.; Wyant, R. W. and Winsor, F. J.: The Spot Welding of Alclad 24S-T in Thicknesses of 0.064, 0.081, and 0.102 Inch. TN 1411, Nov. 1947.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: The Effect of Preheating and Postheating on the Quality of Spot Welds in Aluminum Alloys. TN 1415, Nov. 1947.
- Hess, W. F. and Winsor, F. J.: Further Investigation of Preheating and Postheating in Spot-Welding 0.040-Inch Alclad 24S-T. TN 1440, Dec. 1947.
- Heimerl, George J.: Determination of Plate Compressive Strengths. TN 1480, Dec. 1947.
- Hodge, Webster; Eastwood, L. W.; Lorig, C. H. and Cross, H. C.: Development of Cast Aluminum Alloys for Elevated-Temperature Service. TN 1444, Jan. 1948.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Aircraft Joints. II - Fatigue Characteristics of Sheet and Riveted Joints of 0.040-Inch 24S-T, 75S-T, and R303-T275 Aluminum Alloys. TN 1485, Feb. 1948.
- Jackson, L. R.; Cross, H. C. and Berry, J. M.: Tensile, Fatigue, and Creep Properties of Forged Aluminum Alloys at Temperatures up to 800° F. TN 1469, March 1948.
- Hickman, William A. and Dow, Norris F .: Compressive Strength of 24S-T Aluminum-Alloy Flat Panels with Longitudinal Formed Hat-Section Stiffeners Having Four Ratios of Stiffener Thickness to Skin Thickness. TN 1553, March 1948.

- Howell, F. M.; Stickley, G. W. and Lyst, J. O.: Effects of Surface Finish, of Certain Defects, and of Repair of Defects by Welding on Fatigue Strength of 355-T6 Sand-Castings and Effects of Prior Fatigue Stressing on Tensile Properties. TN 1464, April 1948.
- Heimerl, George J.: Methods of Constructing Charts for Adjusting Test Results for the Compressive Strength of Plates for Differences in Material Properties. TN 1564, April 1948.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T Sheet. TN 1512, May 1948.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T81 Sheet. TN 1513, May 1948.
- Good, James N.: Residual Stress Analysis of Overspeeded Disk with Central Hole by X-Ray Diffraction. RM E8E11, July 1948.
- Moore, R. L.: Bearing Tests of 14S Sheet and Plate. TN 1502, Aug. 1948.
- Moore, R. L.: Bearing Strengths of Some Aluminum-Alloy Sand Castings. TN 1523, Aug. 1948.
- Brueggeman, W. C. and Mayer, M., Jr.: Axial Fatigue Tests at Zero Mean Stress of 24S-T and 75S-T Aluminum-Alloy Strips with a Central Circular Hole. TN 1611, Aug. 1948.
- Dow, Norris F. and Hickman, William A .: Direct-Reading Design Charts for 75S-T Aluminum-Alloy Flat Compression Panels Having Longitudinal Straight-Web Y-Section Stiffeners. TN 1640, Aug. 1948.
- Moore, R. L.: Bearing Strengths of Some Aluminum-Alloy Rolled and Extruded Sections. TN 1503, Sept. 1948.
- Gallaher, George L.: Plate Compressive Strength of FS-1h Magnesium-Alloy Sheet and a Maximum-Strength Formula for Magnesium-Alloy and Aluminum-Alloy Formed Sections. TN 1714, Oct. 1948.
- Dow, Norris F. and Hickman, William A .: Effect of Variation in Diameter and Pitch of Rivets on Compressive Strength of Panels with Z-Section Stiffeners. Panels that Fail by Local Buckling and Have Various Values of Width-to-Thickness Ratio for the Webs of the Stiffeners. TN 1737, Nov. 1948.

- Dow, Norris F.; Hubka, Ralph E. and Roberts, William M.: Direct-Reading Design Charts for 24S-T Aluminum-Alloy Flat Compression Panels Having Longitudinal Straight-Web Y-Section Stiffeners. TN 1777, Jan. 1949.
- Dow, Norris F. and Keevil, Albert S., Jr.:
 Direct-Reading Design Charts for 24ST Aluminum-Alloy Flat Compression
 Panels Having Longitudinal Formed
 Z-Section Stiffeners. TN 1778, Jan.
 1949.
- Dow, Norris F. and Hickman, William A.: Comparison of the Structural Efficiency of Panels Having Straight-Web and Curved-Web Y-Section Stiffeners. TN 1787, Jan. 1949.
- Schuette, E. H.: Observation on the Maximum Average Stress of Flat Plates
 Buckled in Edge Compression. TN
 1625, Feb. 1949.
- Heimerl, George J. and Roberts, William M.: Determination of Plate Compressive Strengths at Elevated Temperatures. TN 1806, Feb. 1949.
- Hickman, William A. and Dow, Norris F.:
 Data on the Compressive Strength of
 75S-T6 Aluminum-Alloy Flat Panels
 with Longitudinal Extruded Z-Section
 Stiffeners. TN 1829, March 1949.
- Dana, A. W.; Aul, E. L. and Sachs, G.:
 Tension Properties of Aluminum Alloys
 in the Presence of Stress-Raisers.
 I Effects of Triaxial Stress States on
 the Fracturing Characteristics of
 24S-T Aluminum Alloy. TN 1830,
 March 1949.
- Aul, E. L.; Dana, A. W. and Sachs, G.:
 Tension Properties of Aluminum Alloys
 in the Presence of Stress-Raisers.
 II Comparison of Notch Strength
 Properties of 24S-T, 75S-T, and
 24S-T86 Aluminum Alloys. TN 1831,
 March 1949.
- Roberts, William M. and Heimerl, George J.: Elevated-Temperature Compressive Stress-Strain Data for 24S-T3 Aluminum-Alloy Sheet and Comparisons with Extruded 75S-T6 Aluminum Alloy. TN 1837, March 1949.
- Pride, Richard A. and Heimerl, George J.: Plastic Buckling of Simply Supported Compressed Plates. TN 1817, April 1949.
- Marin, Joseph and Shelson, William: Biaxial Fatigue Strength of 24S-T Aluminum Alloy. TN 1889, May 1949.

MAGNESIUM

(5.1.2)

- Woodward, R. W.: Recent Developments in Light Alloys. TM 3, Nov. 1920.
- Portevin, A. M. and DeFleury, R.: Ultra-Light Alloys and Their Utilization on Aircraft. TM 262, May 1924.
- Gentzcke, Chief Engineer of the S-L Airship Company: Structural Methods Employed by the Schutte-Lanz Airship Company. TM 313, May 1925.
- Boyer, J. A.: The Corrosion of Magnesium and of the Magnesium Alloys Containing Manganese. Rept. 248, 1926.
- Anon.: Metal Airplane Construction. TM 361, May 1926.
- Rohrbach, Adolf: Materials and Methods of Construction in Light Structures. TM 515, May 1929.
- Schwencke, D.: English Airplane Construction. TM 595, Dec. 1930.
- De Ridder, E. I.: The Use of Elektron Metal in Airplane Construction. TM 608, Feb. 1931.
- Matthaes, Kurt: Fatigue Strength of Airplane and Engine Materials. TM 743, April 1934.
- Mutchler, Willard: The Effect of Continuous Weathering on Light Metal Alloys Used in Aircraft. Rept. 663, 1939.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Metals Used in Aircraft. TN 736, Nov. 1939.
- Paul, D. A. and Moore, R. L.: Cyclic Stress-Strain Studies of Metals in Torsion. TN 790, Dec. 1940.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Metals Used in Aircraft - II. TN 842, Feb. 1942.
- Rossman, Carl A.: Tensile and Compressive Stress-Strain Curves and Flat-End Column Strength for Extruded Magnesium Alloy J-1. ARR (WR L-604), April 1942.
- Wildhack, W. A. and Goerke, V. H.: The Limiting Useful Deflections of Corrugated Metal Diaphragms. TN 876, Dec. 1942.
- Sharp, W. H. and Moore, R. L.: Bearing Tests of Magnesium-Alloy Sheet. TN 897, June 1943.

- Magnesium (Cont.)
- Holt, M.: Column Strength of Magnesium Alloy AM-57S. TN 899, July 1943.
- Aitchison, C. S. and Miller, James A.:
 Tensile and Compressive Tests of
 Magnesium Allow J-1 Sheet. TN 913,
 Dec. 1943.
- Winston, A. W.: Effect of Aging Aircraft Structures on Magnesium Parts. TN 979, April 1945.
- Leary, J. R. and Holt, Marshall: Column Strength of Extruded Magnesium Alloys and AM-C58S and AM-C58S-T5. TN 994, Dec. 1945.
- Rollin, Vern G.: The Effect of Liquid and Ice Particles on the Erosion of a Supercharger-Inlet Cover and Diffuser Vanes. MR E6E31 (WR E-178), June 1946.
- Heimerl, George J. and Niles, Donald E.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 0-1HTA Magnesium Alloy. TN 1156, Jan. 1947.
- Moore, R. L.: Bearing Strength of Some Sand-Cast Magnesium Alloys. TN 1136, Feb. 1947.
- Heimerl, George J.: Determination of Plate Compressive Strengths. TN 1480, Dec. 1947.
- Dow, Norris F. and Hickman, William A.: Structural Evaluation of an Extruded Magnesium-Alloy T-Stiffened Panel. TN 1518, Feb. 1948.
- Gallaher, George L.: Plate Compressive Strength of FS-1h Magnesium-Alloy Sheet and a Maximum-Strength Formula for Magnesium-Alloy and Aluminum-Alloy Formed Sections. TN 1714, Oct. 1948.
- Schuette, E. H.: Observations on the Maximum Average Stress of Flat Plates
 Buckled in Edge Compression. TN
 1625, Feb. 1949.

STEELS

(5.1.3)

- Warner, Edward P.: Metal Construction of Aircraft. TM 153, Nov. 1922.
- Otey, N. S.: Torsional Strength of Nickel Steel and Duralumin Tubing as Affected by the Ratio of Diameter to Gage Thickness. TN 189, April 1924.
- Henrickson, H. B.: Tension Experiments on Diaphragm Metals. TN 261, Aug. 1927.

- Wolff, E. B. and Van Ewijk, L. J. G.: Mechanical Properties of Some Materials Used in Airplane Construction. TM 448, Jan. 1928.
- Martin, Brian L.: Steel Spars. TM 458, April 1928.
- Miller, W. B.: Welding of High Chromium Steels. TN 290, June 1928.
- Ross, Orrin E.: Curves Showing Column Strength of Steel and Duralumin Tubing. TN 306, May 1929.
- Rohrbach, Adolf: Materials and Methods of Construction in Light Structures. TM 515, May 1929.
- Tuckerman, L. B.; Petrenko, S. N. and Johnson, C. D.: Strength of Tubing Under Combined Axial and Transverse Loading. TN 307, June 1929.
- Hoffmann, W.: Welding Rustproof Steels. TM 531, Sept. 1929.
- Bull, H. and Johnson, Lawrence: Welding of Stainless Materials. TM 532, Sept. 1929.
- Brombacher, W. G. and Melton, E. R.:
 Temperature Coefficient of the Modulus
 of Rigidity of Aircraft Instrument Diaphragm and Spring Materials. Rept.
 358, 1930.
- Schwartz, O.: The Relation Between the Tensile Strength and the Hardness of Metals. TM 552, Feb. 1930.
- From "Flight," April 18, 1930: "Gloster" Metal Construction. TM 570, June 1930.
- Knerr, Horace: Identification of Aircraft Tubing by Rockwell Test. TN 342, June 1930.
- Mutchler, W. H. and Buzzard, R. W.:
 Methods for the Identification of Aircraft Tubing of Plain Carbon Steel and
 Chromium-Molybdenum Steel. TN 350,
 Oct. 1930.
- Hartmann, E. C.: Comparison of Weights of 17ST and Steel Tubular Structural Members Used in Aircraft Construction. TN 378, May 1931.
- Russell, H. W. and Welcker, W. A., Jr.: Endurance and Other Properties at Low Temperatures of Some Alloys for Aircraft Use. TN 381, June 1931.
- Brenner, Paul: Problems Involved in the Choice and Use of Materials in Airplane Construction. TM 658, Feb. 1932.

Steels (Cont.)

- Matthaes, Kurt: Fatigue Strength of Airplane and Engine Materials. TM 743, April 1934.
- Müller, J.: Weldability of High-Tensile Steels from Experience in Airplane Construction with Special Reference to Welding Crack Susceptibility. TM 779, Nov. 1935.
- Sullivan, J. E.: A Comparison of Corrosion-Resistant Steel (18 Percent Chromium 8 Percent Nickel) and Aluminum Alloy (24ST). TN 560, March 1936.
- Brueggeman, W. C.: Strength of Welded Aircraft Joints. Rept. 584, 1937.
- Stang, Ambrose H.; Ramberg, Walter and Back, Goldie: Torsion Tests of Tubes. Rept. 601, 1937.
- Osgood, William R.: Column Strength of Tubes Elastically Restrained Against Rotation at the Ends. Rept. 615, 1938.
- Osgood, William R.: The Crinkling Strength and the Bending Strength of Round Aircraft Tubing. Rept. 632, 1938.
- Matthaes, K.: The Influence of Notches Under Static Stress. TM 862, May 1938.
- McAdam, D. J., Jr. and Mebs, R. W.: Tensile Elastic Properties of 18:8 Chromium-Nickel Steel as Affected by Plastic Deformation. Rept. 670, 1939.
- Mutchler, Willard and Galvin, W. G.:
 Tidewater and Weather-Exposure Tests
 on Metals Used in Aircraft. TN 736,
 Nov. 1939.
- McAdam, D. J., Jr. and Mebs, R. W.: Tensile Elastic Properties of Typical Stainless Steels and Nonferrous Metals as Affected by Plastic Deformation and by Heat Treatment. Rept. 696, 1940.
- Müller, J.: The Cause of Welding Cracks in Aircraft Steels. TM 955, Oct. 1940.
- Winter, George: Stress Distribution in and Equivalent Width of Flanges of Wide, Thin-Wall Steel Beams. TN 784, Nov. 1940.
- Upson, Ralph H.: Structural Tests of a Stainless Steel Wing Panel by Hydrostatic Loading. TN 786, Nov. 1940.
- Paul, D. A. and Moore, R. L.: Cyclic Stress-Strain Studies of Metals in Torsion. TN 790, Dec. 1940.

- Mebs, R. W. and McAdams, D. J., Jr.: The Tensile Elastic Properties at Low Temperatures of 18:8 Cr-Ni Steel as Affected by Heat Treatment and Slight Plastic Deformation. TN 818, July 1941.
- Bollenrath, F.: Factors Influencing the Fatigue Strength of Materials. TM 987, Sept. 1941.
- Pollard, R. E. and Reinhart, Fred M.: Relief of Residual Stress in Streamline Tie Rods by Heat Treatment. TN 832, Nov. 1941.
- Aitchison, C. S. and Miller, James A.: Tensile and Pack Compressive Tests of Some Sheets of Aluminum Alloy, 1025 Carbon Steel, and Chromium-Nickel Steel. TN 840, Feb. 1942.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Metals Used in Aircraft - II. TN 842, Feb. 1942.
- Clark, Donald S.: The Influence of Impact Velocity on the Tensile Characteristics of Some Aircraft Metals and Alloys. TN 868, Oct. 1942.
- Mebs, R. W. and McAdam, D. J., Jr.: Torsional Elastic Properties of 18:8 Chromium-Nickel Steel as Affected by Plastic Deformation and by Heat Treatment. TN 886, Jan. 1943.
- Kies, J. A. and Holshouser, W. L.: Effects of Prior Fatigue-Stressing on the Impact Resistance of Chromium-Molybdenum Aircraft Steel. TN 889, March 1943.
- Osgood, William R.: Round Heat-Treated Chromium-Molybdenum-Steel Tubing Under Combined Loads. TN 896, July 1943.
- Ramberg, Walter and Osgood, William R.: Description of Stress-Strain Curves by Three Parameters. TN 902, July 1943.
- Russell, H. W.; Gillett, H. W.; Jackson, L. R. and Foley, G. M.: The Effect of Surface Finish on the Fatigue Performance of Certain Propeller Materials. TN 917, Dec. 1943.
- Hess, W. F. and Nippes, E. F., Jr.: A Method for Welding Sheet Aluminum to SAE 4140 Steel. ARR 4A01 (WR W-102), Jan. 1944.
- Mebs, R. W. and McAdam, D. J., Jr.: The Influence of Plastic Deformation and of Heat Treatment on Poisson's Ratio for 18:8 Chromium-Nickel Steel. TN 928, Feb. 1944.

Steels (Cont.)

- Bobrowsky, A. R.; Kittel, J. Howard and Boegli, Charles P.: Experimental Study of the Coating Formed on Nitrided-Steel Piston Rings During Operation in Nitridea-Steel Cylinders. ACR E4C31 (WR E-143), March 1944.
- Clark, Thomas P.: A Positive-Replica Technique for Examining Finished Metal Surfaces and Its Application to Aircraft-Engine Cylinders. RB E4I07 (WR E-107), Sept. 1944.
- Kittel, J. Howard and Vierthaler, Walter A.: Experimental Study of the Coating Found on Scuffed Cast-Iron Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4K02 (WR E-29), Nov. 1944.
- Collins, John H., Jr.; Bisson, Edmond E. and Schmiedlin, Ralph F.: Nitrided-Steel Piston Rings for Engines of High Specific Power. Rept. 817, 1945.
- Good, J. N. and Brockway, L. O.: An Electron and X-Ray Diffraction Investigation of Surface Changes on Nitrided-Steel Piston Rings During Engine Operation in Nitrided-Steel Cylinder Barrels. ACR E4L27 (WR E-145), March 1945.
- Bennet, J. A.: Effect of Fatigue-Stressing Short of Failure on Some Typical Aircraft Metals. TN 992, Oct. 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of a Large Forged Disc of CSA (234-A-5) Alloy. ARR 5H17 (WR W-73), Oct. 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: The Rupture Test Characteristics of Six Precision-Cast and Three Wrought Alloys at 1700° and 1800° F. ARR 5J16 (WR W-75), Nov. 1945.
- Freeman, J. W. and Cross, H. C.: A Metallurgical Investigation of a Large Forged Disc of Low-Carbon N-155 Alloy. ARR 5K20 (WR W-103), Dec. 1945.
- Bollenrath, Franz: The Further Development of Heat-Resistant Materials for Aircraft Engines. TM 1093, Sept. 1946.
- Clark, Thomas P. and Vierthaler, Walter A.: An Electron-Microscope Study of Used Nitrided-Steel Piston Rings. TN 1132, Sept. 1946.
- Mutchler, Willard: Marine Exposure Tests on Stainless Steel Sheet. TN 1095, Feb. 1947.

- Mebs, R. W. and McAdam, D. J., Jr.: Elastic Properties in Tension and Shear of High Strength Nonferrous Metals and Stainless Steel Effect of Previous Deformation and Heat Treatment. TN 1100, March 1947.
- Kittel, J. Howard: Comparison of Crystal Structures of 10 Wrought Heat-Resisting Alloys at Elevated Temperatures with Their Crystal Structures at Room Temperatures. TN 1488, Nov. 1947.
- Voldrich, C. B. and Armstrong, E. T.:
 Effect of Variables in Welding Technique on the Strength of Direct-Current Metal-Arc-Welded Joints in Aircraft Steel. II Repeated-Stress Tests of Joints in SAE 4130 Seamless Steel Tubing. TN 1262, April 1948.
- Zeyen, K. L.: Susceptibility to Welding Cracking, Welding Sensitivity, Susceptibility to Welding Seam Cracking, and Test Methods for These Failures. TM 1249, June 1949.

HEAT-RESISTING ALLOYS

(5.1.4)

- Compiled by Coordination Office, NACA:
 Physical Data of Certain Alloys for
 High-Temperature Applications. ACR
 3D28 (WR W-80), April 1943.
- Freeman, J. W.; Rote, F. B. and White, A. E.: High Temperature Characteristics of 17 Alloys at 1200° and 1350° F. ACR 4C22 (WR W-93), March 1944.
- Mutchler, Willard: The Effect of Temperature on Sheet Metals for Airplane Firewalls. TN 965, Dec. 1944.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of a Large Forged Disc of 19-9 DL Alloy. ACR 5C10, March 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of a Large Forged Disc of CSA (234-A-5) Alloy. ARR 5H17 (WR W-73), Oct. 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: The Rupture Test Characteristics of Six Precision-Cast and Three Wrought Alloys at 1700° and 1800° F. ARR 5J16 (WR W-75), Nov. 1945.
- Freeman, J. W. and Cross, H. C.: A Metallurgical Investigation of a Large Forged Disc of Low-Carbon N-155 Alloy. ARR 5K20 (WR W-103), Dec. 1945.

- Heat-Resisting Alloys (Cont.)
- Kittel, J. Howard: The Crystal Structure at Room Temperature of Eight Forged Heat-Resisting Alloys. TN 1102, July 1946.
- Machlin, E. S. and Nowick, A. S.: Stress Rupture of Heat-Resisting Alloys as a Rate Process. TN 1126, Sept. 1946.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: Evaluation of Two High-Carbon Precision-Cast Alloys at 1700° and 1800° F by the Rupture Test. TN 1130, Sept. 1946.
- Bollenrath, Franz: The Further Development of Heat-Resistant Materials for Aircraft Engines. TM 1093, Sept. 1946.
- Kunen, Alfred E.; Hartwig, Frederick J. and Bressman, Joseph R.: Tensile Properties of a Sillimanite Refractory at Elevated Temperatures. TN 1165, Nov. 1946.
- Cross, Howard C. and Freeman, J. W.: A Metallurgical Investigation of Large Forged Discs of Low-Carbon N-155 Alloy. TN 1230, April 1947.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: An Investigation of the High-Temperature Properties of Chromium-Base Alloys at 1350° F. TN 1314, June 1947.
- Rosenbaum, Burt M.: The Crystal Structure at Room Temperature of Six Cast Heat-Resisting Alloys. RM E7D23, June 1947.
- Lidman, William G.: Determination of Stress-Rupture Parameters for Four Heat-Resisting Alloys. RM E7G18a, Aug. 1947.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: The 1350° F Stress-Rupture Properties of Two Wrought Alloys and Three Cast Alloys. TN 1380, Nov. 1947.
- Kittel, J. Howard: Comparison of Crystal Structures of 10 Wrought Heat-Resisting Alloys at Elevated Temperatures with Their Crystal Structures at Room Temperatures. TN 1488, Nov. 1947.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: The Rupture-Test Characteristics of Heat-Resistant Sheet Alloys at 1700° and 1800° F. TN 1465, Feb. 1948.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Five Forged Gas-Turbine Discs of Timken Alloy. TN 1531, June 1948.

- Hoffman, Charles A. and Ault, G. Mervin: Application of Statistical Methods to the Study of Gas-Turbine Blade Failures. TN 1603, June 1948.
- Rosenbaum, B. M.: X-Ray Diffraction Investigation of Minor Phases of High-Temperature Alloys. TN 1580, July 1948.
- Moore, D. G.; Bolz, L. H. and Harrison, W. N.: A Study of Ceramic Coatings for High-Temperature Protection of Molybdenum. TN 1626, July 1948.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Two Contour-Forged Gas-Turbine Discs of 19-9DL Alloy. TN 1532, Sept. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Large Discs of CSA Alloy. TN 1533, Sept. 1948.
- Moore, D. G.; Richmond, J. C. and Harrison, W. N.: High-Temperature Attack of Various Compounds on Four Heat-Resisting Alloys. TN 1731, Oct. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of a Contour-Forged Disc of EME Alloy. TN 1534, Nov. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Turbosupercharger Discs of 19-9DL Alloy. TN 1535, Nov. 1948.
- Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: Properties of 19-9DL Alloy Bar Stock at 1200° F. TN 1758, Nov. 1948.
- Freeman, J. W. and Cross, Howard C.: NACA and Office of Naval Research Metallurgical Investigation of Two Large Forged Discs of S-590 Alloy. TN 1760, Feb. 1949.
- Cross, Howard C. and Freeman, J. W.:
 Office of Naval Research and NACA
 Metallurgical Investigation of a Large
 Forged Disc of S-816 Alloy. TN 1765,
 Feb. 1949.
- Hoffman, Charles A.; Ault, G. Mervin and Gangler, James J.: Initial Investigation of Carbide-Type Ceramal of 80-Percent Titanium Carbide Plus 20-Percent Cobalt for Use as Gas-Turbine-Blade Material. TN 1836, March 1949.
- Cross, Howard C. and Freeman, J. W.:
 Office of Naval Research and NACA
 Metallurgical Investigation of a Large
 Forged Disc of Inconel X Alloy. TN
 1770, April 1949.

- Heat-Resisting Alloys (Cont.)
- Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: A Study of Effects of Heat Treatment and Hot-Cold-Work on Properties of Low-Carbon N-155 Alloy. TN 1867, May 1949.
- Deutsch, George C.; Repko, Andrew J. and Lidman, William G.: Elevated-Temperature Properties of Several Titanium Carbide Base Ceramals. TN 1915, July 1949.
- Meerson, G. A. and Lipkes, Y. M.: Investigation of Conditions of Titanium Carbonization IV. TN 1235, July 1949.
- Frey, D. N.; Freeman, J. W. and White, A. E.: Fundamental Effects of Aging on Creep Properties of Solution-Treated Low-Carbon N-155 Alloy. TN 1940, Aug. 1949.

CERAMICS

(5.1.5)

- Silsbee, F. B.; Honaman, R. K.; Fonseca, E. L.; Bleininger, A. V. and Staley, H. F.: Properties and Preparation of Ceramic Insulators for Spark Plugs. Rept. 53, 1920.
- Chandler, H. C.: Ceramic Insulators for Aviation Spark Plugs. OCR Report 3, Jan. 1941.
- Conway, H. M.: The Possible Use of Ceramic Materials in Aircraft Propulsion Systems. CB 4D10, April 1944.
- Geller, R. F. and Burdick, M. D.: Progress Report on Strength and Creep of Special Ceramic Bodies in Tension at Elevated Temperatures. ARR 6D24 (WR W-48), June 1946.
- Bollenrath, Franz: The Further Development of Heat-Resistant Materials for Aircraft Engines. TM 1093, Sept. 1946.
- Kunen, Alfred E.; Hartwig, Frederick J. and Bressman, Joseph R.: Tensile Properties of a Sillimanite Refractory at Elevated Temperatures. TN 1165, Nov. 1946.
- Harrison, W. N.; Moore, D. G. and Richmond, J. C.: Review of an Investigation of Ceramic Coatings for Metallic Turbine Parts and Other High-Temperature Applications. TN 1186, March 1947.
- Hartwig, Frederick J.; Sheflin, Bob W. and Jones, Robert J.: Preliminary Investigation of a Gas Turbine with Sillimanite Ceramic Rotor Blades. TN 1399, July 1947.

- Woodward, William H. and Bobrowsky, A. R.: Preliminary Investigation of a Ceramic Lining for a Combustion Chamber for Gas-Turbine Use. RM E7H20, April 1948.
- Moore, D. G.; Richmond, J. C. and Harrison, W. N.: High-Temperature Attack of Various Compounds on Four Heat-Resisting Alloys. TN 1731, Oct. 1948.
- Freche, John C. and Sheflin, Bob W.: Investigation of a Gas Turbine with National Bureau of Standards Body 4811 Ceramic Rotor Blades. RM E8G20, Oct. 1948.
- Kinney, George R. and Lidman, William G.: Investigation of Ceramic, Graphite, and Chrome-Plated Graphite Nozzles on Rocket Engine. RM E8L16, March 1949.
- Burdick, M. D.; Moreland, R. E. and Geller, R. F.: Strength and Creep Characteristics of Ceramic Bodies at Elevated Temperatures. TN 1561, April 1949.
- Gangler, James J.; Robards, Chester F. and McNutt, James E.: Physical Properties at Elevated Temperature of Seven Hot-Pressed Ceramics. TN 1911, July 1949.
- Deutsch, George C.; Repko, Andrew J. and Lidman, William G.: Elevated-Temperature Properties of Several Titanium Carbide Base Ceramals. TN 1915, July 1949.
- Meerson, G. A. and Lipkes, Y. M.: Investigation of Conditions of Titanium Carbonization IV. TM 1235, July 1949.
- Lidman, W. G. and Bobrowsky, A. R.: Correlation of Physical Properties of Ceramic Materials with Resistance to Fracture by Thermal Shock. TN 1918, July 1949.

PLASTICS

(5.1.6)

- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - I. Materials. TN 198, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - II. Method of Construction. TN 199, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - III. General Description of the Design. TN 200, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - IV. Technical Methods of Design. TN 201, Sept. 1924.

- Axilrod, Benjamin M. and Kline, Gordon M.: A Study of Transparent Plastics for Use on Aircraft. ACR, May 1937.
- Riechera, K.: Synthetic Resins in Aircraft Construction - Their Composition, Properties, Present State of Development and Application to Light Structures. TM 841, Nov. 1937.
- Kline, G. M.: Plastics as Structural Materials for Aircraft. TN 628, Dec. 1937.
- Riechers, K. and Olms, J.: Application and Testing of Transparent Plastics Used in Airplane Construction. TM 881, Nov. 1938.
- Fishbein, Meyer: Physical Properties of Synthetic Resin Materials. TN 694, March 1939.
- Axilrod, Benjamin M. and Kline, Gordon M.: Resistance of Transparent Plastics to Impact. TN 718, July 1939.
- Use of Plastics in Aircraft. OCR Report, May 1940.
- Kline, G. M.; Axilrod, B. M. and Turner, P. S.: Properties of Reinforced Plastics and Plastic Plywoods. ARR, July 1941.
- Chandler, H. C.; Hartman, E. P. and McCann, W. J.: The Application of Plastics and Plywood in the Aircraft Industry. OCR Report, Aug. 1941.
- Perkuhn, H.: The Creep of Laminated Synthetic Resin Plastics. TM 995, Nov. 1941.
- Turner, P. S.: The Problem of Thermal-Expansion Stresses in Reinforced Plastics. ARR (WR W-36), June 1942.
- Axilrod, B. M.; Turner, P. S.; Reinhart, F. W. and Kline, G. M.: Plastic Materials for Aircraft Structures. ARR, July 1942.
- Axilrod, B. M.: Strength and Fatigue Tests on a Laminated Paper-Base Plastic Proposed for Use in Molding Propellers. ARR, Aug. 1942.
- Von Hippel, Arthur R. and Dietz, A. G. H.: Curing of Resin-Wood Combinations by High-Frequency Heating. TN 874, Dec. 1942.
- Kynoch, William and Patronsky, L. A.: Effect of Fillers and of Mixing Procedure on the Strength of Plastic Materials. TN 878, Jan. 1943.

- Findley, William N.: Mechanical Tests of Macerated Phenolic Molding Material. ARR 3F19 (WR W-99), June 1943.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. I - General Analysis. ARR 3I10 (WR W-59), Sept. 1943.
- Rinker, R. C.; Reinhart, F. W. and Kline, G. M.: Effect of pH on Strength of Resin Bonds. ARR 3J11 (WR W-46), Oct. 1943.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. II Lightning Conductor Materials. ARR 3J12 (WR W-60), Oct. 1943.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. III Electrical Effects in Glider Towlines. ARR 4C20 (WR W-62), March 1944.
- Bradley, Kathryn H. and Axilrod, B. M.: Plastic Mountings for Aircraft Windshields. TN 936, May 1944.
- Schuette, Evan H.; Rafel, Norman and Dobrowski, Charles V.: Compression Tests of Six Curved Paper-Base Plastic Panels with Outward-Acting Normal Pressure. MR (WR L-280), Sept. 1944.
- Zender, George W.; Schuette, Evan H. and Weinberger, Robert A.: Data on Material Properties and Panel Compressive Strength of a Plastic-Bonded Material of Glass Cloth and Canvas. TN 975, Dec. 1944.
- Rafel, Norman and Schuette, Evan H.: Material Properties of Two Types of Plastic Bonded Glass Cloth. RB L4H16 (WR L-225), Dec. 1944.
- Bruhn, Elmer F.: Tests on Thin-Walled Celluloid Cylinders to Determine the Interaction Curves Under Combined Bending, Torsion, and Compression or Tension Loads. TN 951, Jan. 1945.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. IV Electrocution Hazards from Inductive Voltages. ARR 4I28 (WR W-85), March 1945.
- Axilrod, Benjamin M. and Koenig, Evelyn: Properties of Some Expanded Plastics and Other Low-Density Materials. TN 991, Sept. 1945.
- Turner, P. S. and Thomason, R. H.: Correlation Between Strength Properties in Standard Test Specimens and Molded Phenolic Parts. TN 1005, May 1946.

Plastics (Cont.)

- Lamb, J. J.; Albrecht, Isabelle and Axilrod, B. M.: Impact Strength and Flexural Properties of Laminated Plastics at High and Low Temperatures. TN 1054, Aug. 1946.
- Marin, Joseph: Static and Dynamic Creep Properties of Laminated Plastics for Various Types of Stress. TN 1105, Feb. 1947.
- Crouse, W. A.; Caudill, D. C. and Reinhart, F. W.: Effect of Simulated Service Conditions on Plastics. TN 1240, July 1947.
- Crouse, W. A.; Caudill, D. C. and Reinhart, F. W.: Effect of Simulated Service Conditions on Plastics During Accelerated and 2-Year Weathering Tests. TN 1438, May 1948.
- Lamb, J. J.; Boswell, Isabelle and Axilrod, B. M.: Tensile and Compressive Properties of Laminated Plastics at High and Low Temperatures. TN 1550, July 1948.
- Findley, William N. and Worley, Will J.: Mechanical Properties of Five Laminated Plastics. TN 1560, Aug. 1948.

WOODS

(5.1.7)

- Sparhawk, W. N.: Supplies and Production of Aircraft Woods. Rept. 67, 1919.
- Tiemann, Harry D.: The Kiln Drying of Woods for Airplanes. Rept. 65, 1920.
- Wilson, T. R. C.: The Effect of Kiln Drying on the Strength of Airplane Woods. Rept. 68, 1920.
- Elmendorf, Armin: Data on the Design of Plywood for Aircraft. Rept. 84, 1920.
- Heim, A. L.; Knauss, A. C. and Seutter, Louis: Internal Stresses in Laminated Construction. Rept. 145, 1922.
- Impact Tests for Woods. TN 78, Feb. 1922.
- Bureau of Standards: Test of Specimen of Wood of Longerons of the S.E.5 Airplane After Seven Years' Service. TM 129, Aug. 1922.
- Baumann, Richard: Determination of the Value of Wood for Structural Purposes. TN 138, April 1923.
- Seehase, H.: Wood Versus Metal in Airplane Construction. TM 212, June 1923.

- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength. I Deflection of Beams with Special Reference to Shear Deformations. Rept. 180, 1924.
- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength. II Form Factors of Beams Subjected to Transverse Loading Only. Rept. 181, 1924.
- Newlin, J. A. and Trayer, G. W.: The Influence of the Form of a Wooden Beam on Its Stiffness and Strength. III Stresses in Wood Members Subjected to Combined Column and Beam Action. Rept. 188, 1924.
- Gentzcke, Chief Engineer of the S-L Airship Company: Structural Methods
 Employed by the Schutte-Lanz Airship
 Company. TM 313, May 1925.
- Wolff, E. B. and Van Ewijk, L. J. G.: Protection of Wooden Airplane Parts
 Against Moisture by Means of Varnish.
 TM 348, Feb. 1926.
- Bromley, Stevens and Robinson, William H., Jr.: The Lateral Failure of Spars. TN 232, March 1926.
- From "Zeitschrift fur Flugtechnik und Motorluftschiffahrt," July 14, 1926: Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt," July 17, 1926, in Dusseldorf, Germany. TM 379, Sept. 1926.
- Rizzo, Frank: Precision of Wing Sections and Consequent Aerodynamic Effects. TN 255, Jan. 1927.
- Wolff, E. B. and Van Ewijk, L. J. G.: Mechanical Properties of Some Materials Used in Airplane Construction. TM 448, Jan. 1928.
- Trayer, G. W.: Bearing Strength of Wood Under Steel Aircraft Bolts and Washers and Other Factors Influencing Fitting Design. TN 296, Oct. 1928.
- Trayer, George W.: The Design of Plywood Webs for Airplane Wing Beams. Rept. 344, 1930.
- Newlin, J. A. and Trayer, Geo. W.: The Design of Airplane Wing Ribs. Rept. 345, 1930.
- Markwardt, L. J.: Aircraft Woods: Their Properties, Selection, and Characteristics. Rept. 354, 1930.

Woods (Cont.)

- Von Baranoff, A.: Determination of the Best Cross Section for a Box Beam Subjected to Bending Stresses. TM 577, Aug. 1930.
- Schrenk, Martin: Structural Details of German Light Airplanes. TM 579, Aug. 1930.
- Trayer, George W. and March, H. W.: Elastic Instability of Members Having Sections Common in Aircraft Construction. Rept. 382, 1931.
- Brenner, Paul: Problems Involved in the Choice and Use of Materials in Airplane Construction. TM 658, Feb. 1932.
- Kline, G. M.; Axilrod, B. M. and Turner, P. S.: Properties of Reinforced Plastics and Plastic Plywoods. ARR, July 1941.
- Kollmann, Franz: The Mechanical Properties of Wood of Different Moisture Content Within -200° to +200° C Temperature Range. TM 984, Sept. 1941.
- Lundquist, Eugene E.; Kotanchik, Joseph N. and Zender, George W.: A Study of the Compressive Strength of Stiffened Plywood Panels. RB, Aug. 1942.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. I - General Analysis. ARR 3I10 (WR W-59), Sept. 1943.
- Axilrod, B. M. and Jirauch, D. H.: Bonding Strengths of Adhesives at Normal and Low Temperatures. TN 964, Jan. 1945.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. IV Electrocution Hazards from Inductive Voltages. ARR 4I28 (WR W-85), March 1945.
- Kline, G. M.; Reinhart, F. W.; Rinker, R. C. and De Lollis, N. J.: Effect of Catalysts and pH on Strength of Resin-Bonded Plywood. TN 1161, April 1947.
- Borsari, Palamede and Yu, Ai-ting: Shear Lag in a Plywood Sheet-Stringer Combination Used for the Chord Member of a Box Beam. TN 1443, March 1948.
- Smith, C. B. and Voss, A. W.: Stress Distribution in a Beam of Orthotropic Material Subjected to a Concentrated Load. TN 1486, March 1948.

ADHESIVES

(5.1.8)

- Allen, S. W. and Truax, T. R.: Glues Used in Airplane Parts. Rept. 66, 1920.
- Heim, A. L.; Knauss, A. C. and Seutter, Louis: Internal Stresses in Laminated Construction. Rept. 145, 1922.
- Turner, P. S.: The Problem of Thermal-Expansion Stresses in Reinforced Plastics. ARR (WR W-36), June 1942.
- Axilrod, B. M.; Turner, P. S.; Reinhart, F. W. and Kline, G. M.: Progress Report on Strength Properties of Plastic Panels Bonded with Cycleweld Adhesive. ACR, Sept. 1942.
- Von Hippel, Arthur R. and Dietz, A. G. H.: Curing of Resin-Wood Combinations by High-Frequency Heating. TN 874, Dec. 1942.
- Axilrod, B. M. and Jirauch, D. H.: Bonding Strengths of Adhesives at Normal and Low Temperatures. TN 964, Jan. 1945.
- Rinker, R. C. and Kline, G. M.: Survey of Adhesives and Adhesion. TN 989, Aug. 1945.
- Kline, G. M.; Reinhart, F. W.; Rinker, R. C. and De Lollis, N. J.: Effect of Catalysts and pH on Strength of Resin-Bonded Plywood. TN 1161, April 1947.
- De Lollis, N. J.; Rucker, Nancy and Wier, J. E.: Comparative Strengths of Some Adhesive-Adherent Systems. TN 1863, March 1949.

PROTECTIVE COATINGS

(5.1.9)

- Smith, W. H.: Airplane Dopes and Doping. Rept. 38, 1920.
- Dunlap, M. E.: Moisture Resistant Finishes for Airplane Woods. Rept. 85, 1920.
- Warner, Edward P.: Depreciation of Aircraft. TM 175, Dec. 1922.
- Wolff, E. B. and Van Ewijk, L. J. G.: Protection of Wooden Airplane Parts
 Against Moisture by Means of Varnish.
 TM 348, Feb. 1926.
- Nelson, Lieut. Comdr. Wm. (CC), USN: The Protection of Duralumin from Corrosion. TM 404, March 1927.
- Nelson, Lieut. Comdr. Wm. (CC), USN: Duralumin and Its Corrosion. TM 408, April 1927.

- Protective Coatings (Cont.)
- Dix, E. H., Jr.: "Alclad" A New Corrosion Resistant Aluminum Product. TN 259, Aug. 1927.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. IV - The Use of Protective Coatings. TN 285, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. V - Results of Weather-Exposure Tests. TN 304, Feb. 1929.
- Brenner, Paul: Problems Involved in the Choice and Use of Materials in Airplane Construction. TM 658, Feb. 1932.
- Lecoeuvre, R.: The Protection Against Corrosion of Metals and Alloys Used in Aircraft Construction. MP 36, July 1933.
- Mutchler, Willard: The Weathering of Aluminum Alloy Sheet Materials Used in Aircraft. Rept. 490, 1934.
- Mutchler, Willard: The Effect of Continuous Weathering on Light Metal Alloys Used in Aircraft. Rept. 663, 1939.
- Mutchler, Willard and Galvin, W. G.:
 Tidewater and Weather-Exposure Tests
 on Metals Used in Aircraft. TN 736,
 Nov. 1939.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of the Surface Treatment of Alclad 24S-T in Preparation for Spot-Welding. OCR Progress Report No. 3, Sept. 1941.
- Hartmann, E. C. and Reedy, J. F.: The Effect of Various Surface Conditions on Press Fits of Steel Bushings and 17S-T Aluminum-Alloy Fittings. ARR (WR W-35), Dec. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: The Surface Treatment at Room Temperature of Aluminum Alloys for Spot Welding. OCR Progress Report No. 12, April 1943.
- Bobrowsky, A. R.; Kittle, J. Howard and Boegli, Charles P.: Experimental Study of the Coating Formed on Nitrided-Steel Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4C31 (WR E-143), March 1944.
- Kittel, J. Howard and Viethaler, Walter A.:
 Experimental Study of the Coating
 Found on Scuffed Cast-Iron Piston
 Rings During Operation in NitridedSteel Cylinders. ACR E4K02 (WR
 E-29), Nov. 1944.

- Johnson, Robert L. and Swikert, Max: Single-Cylinder Oil-Control Tests of Porous Chrome-Plated Cylinder Barrels for Radial Air-Cooled Engines. ARR E5L18 (WR E-25), Jan. 1946.
- Johnson, Robert L. and Anderson, Roy
 I.: Single-Cylinder Engine Tests of
 Porous Chrome-Plated Cylinder Barrels with Special Bore Coatings for
 Radial Air-Cooled Engines. ARR
 E5L18a (WR E-28), Jan. 1946.
- Rollin, Vern G.: The Effect of Liquid and Ice Particles on the Erosion of a Supercharger-Inlet Cover and Diffuser Vanes. MR E6E31 (WR E-178), June 1946.
- Mutchler, Willard: Marine Exposure Tests on Stainless Steel Sheet. TN 1095, Feb. 1947.
- Harrison, W. N.; Moore, D. G. and Richmond, J. C.: Review of an Investigation of Ceramic Coatings for Metallic Turbine Parts and Other High-Temperature Applications. TN 1186, March 1947.
- Woodward, William H. and Bobrowsky, A. R.: Preliminary Investigation of a Ceramic Lining for a Combustion Chamber for Gas-Turbine Use. RM E7H20, April 1948.
- Moore, D. G.; Bolz, L. H. and Harrison, W. N.: A Study of Ceramic Coatings for High-Temperature Protection of Molybdenum. TN 1626, July 1948.
- Moore, D. G.; Richmond, J. C. and Harrison, W. N.: High-Temperature Attack of Various Compounds on Four Heat-Resisting Alloys. TN 1731, Oct. 1948.
- Whitman, M. J. and Repko, A. J.: Oxidation of Titanium Carbide Base Ceramals Containing Molybdenum, Tungsten, and Cobalt. TN 1914, July 1949.

FABRICS

(5.1.10)

- The Goodyear Tire and Rubber Company: Relative Worth of Improvements on Fabrics. Rept. 5, 1915.
- Gibbons, Willis A. and Smith, Omar H.:
 Investigations of Balloon and Aeroplane
 Fabrics Part I. Gibbons, Willis A.:
 Part II. Rept. 6, 1915.

Fabrics (Cont.)

- Haas, Rudolf: The Stretching of the Fabric and the Deformation of the Envelope in Non-Rigid Balloons. I The Stretching of the Fabric and the Shape of the Envelope. Dietzius, Alexander: II The Deformation of the Envelope of the Siemens-Schuckert Airship. Rept. 16, 1917.
- Subcommittee on Standardization and Investigation of Materials: Fabrics for Aeronautic Construction. I Cotton Airplane Fabrics. II Balloon Fabrics. Rept. 22, 1917.
- Walen, E. Dean: The Structure of Airplane Fabrics. Rept. 36, 1919.
- Edwards, Junius D. and Moore, Irwin L.: The Testing of Balloon Fabrics. Rept. 39, 1920.
- Zahm, A. F.: Relation of Rib Spacing to Stress in Wing Planes. TN 5, May 1920.
- Pröll, A.: Flexibility of Bearing Surfaces and Stress on Fabrics. TM 27, June 1921.
- Wendt, Fr.: Deterioration of Airplane Fabrics. TM 63, Feb. 1922.
- Pröll, A.: Experiments with Fabrics for Covering Airplane Wings. TN 137, April 1923.
- Pröll, A.: Experiments with Fabrics for Covering Airplane Wings to Determine Effect of Method of Installation. TN 168, Dec. 1923.
- Pröll, A.: Testing Airplane Fabrics. TN 186, April 1924.
- Rizzo, Frank: Precision of Wing Sections and Consequent Aerodynamic Effects. TN 255, Jan. 1927.
- Wolff, E. B. and Van Ewijk, L. J. G.: Mechanical Properties of Some Materials Used in Airplane Construction. TM 448, Jan. 1928.
- Rohrbach, Adolf: Materials and Methods of Construction in Light Structures. TM 515, May 1929.
- McNicholas, H. J. and Hedrick, A. F.: The Structure and Properties of Parachute Cloths. TN 335, March 1930.
- Schwencke, D.: English Airplane Construction. TM 595, Dec. 1930.
- Appel, Wm. D. and Worner, R. K.: An Investigation of Cotton for Parachute Cloth. TN 393, Sept. 1931.

- Schraivogel, Karl: The Testing of Airplane Fabrics. TM 693, Nov. 1932.
- Wilkie, J. B.: Mercerization of Cotton for Strength with Special Reference to Aircraft Cloth. TN 450, Feb. 1933.
- Migotsky, Eugene: Investigation for the Development of a High-Speed Antiaircraft Tow Target. MR (WR L-760), July 1943.
- Lamb, J. J.; Boswell, Isabelle and Axilrod, B. M.: Tensile and Compressive Properties of Laminated Plastics at High and Low Temperatures. TN 1550, July 1948.

SANDWICH AND LAMINATES

(5.1.11)

- Caldwell, F. W. and Clay, N. S.: Micarta Propellers. I - Materials. TN 198, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers. II - Method of Construction. TN 199, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers. III - General Description of the Design. TN 200, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers. IV - Technical Methods of Design. TN 201, Sept. 1924.
- Use of Plastics in Aircraft. OCR Report, May 1940.
- Chandler, H. C.; Hartman, E. P. and McCann, W. J.: The Application of Plastics and Plywood in the Aircraft Industry. OCR Report, Aug. 1941.
- Turner, P. S.: The Problem of Thermal-Expansion Stresses in Reinforced Plastics. ARR (WR W-36), June 1942.
- Axilrod, B. M.; Turner, P. S.; Reinhart, F. W. and Kline, G. M.: Plastic Materials for Aircraft Structures. ARR, July 1942.
- Axilrod, B. M.: Strength and Fatigue Tests on a Laminated Paper-Base Plastic Proposed for Use in Molding Propellers. ARR, Aug. 1942.
- Axilrod, B. M.; Turner, P. S.; Reinhart, F. W. and Kline, G. M.: Progress Report on Strength Properties of Plastic Panels Bonded with Cycleweld Adhesive. ACR, Sept. 1942.

Sandwich and Laminates (Cont.)

- Von Hippel, Arthur R. and Dietz, A. G. H.: Curing of Resin-Wood Combinations by High-Frequency Heating. TN 874, Dec. 1942.
- Zender, George W.; Schuette, Evan H. and Weinberger, Robert A.: Data on Material Properties and Panel Compressive Strength of a Plastic-Bonded Material of Glass Cloth and Canvas. TN 975, Dec. 1944.
- Marin, Joseph: Static and Dynamic Creep Properties of Laminated Plastics for Various Types of Stress. TN 1105, Feb. 1947.
- Kline, G. M.: Reinhart, F. W.; Rinker, R. C. and De Lollis, N. J.: Effect of Catalysts and pH on Strength of Resin-Bonded Plywood. TN 1161, April 1947.
- Norris, Charles B.: An Analysis of the Compressive Strength of Honeycomb Cores for Sandwich Constructions. TN 1251, April 1947.
- Libove, Charles and Batdorf, S. B.: A General Small-Deflection Theory for Flat Sandwich Plates. TN 1526, April 1948.
- Norris, C. B. and Mackin, G. E.: An Investigation of Mechanical Properties of Honeycomb Structures Made of Resin-Impregnated Paper. TN 1529, May 1948.
- Lamb, J. J.; Boswell, Isabelle and Axilrod, B. M.: Tensile and Compressive Properties of Laminated Plastics at High and Low Temperatures. TN 1550, July 1948.
- Seide, Paul and Stowell, Elbridge Z.: Elastic and Plastic Buckling of Simply Supported Metalite Type Sandwich Plates in Compression. TN 1822, Feb. 1949.
- Reissner, Eric: Small Bending and Stretching of Sandwich-Type Shells. TN 1832, March 1949.
- Hildebrand, F. B.; Reissner, E. and Thomas, G. B.: Notes on the Foundations of the Theory of Small Displacements of Orthotropic Shells. TN 1833, March 1949.
- Seide, Paul: Compressive Buckling of Flat Rectangular Metalite Type Sandwich Plates with Simply Supported Loaded Edges and Clamped Unloaded Edges. TN 1886, May 1949.
- Seide, Paul: Shear Buckling of Infinitely Long Simply Supported Metalite Type Sandwich Plates. TN 1910, July 1949.

MISCELLANEOUS TYPES

(5.1.12)

- Dorsey, N. E.: Self-Luminous Materials. Rept. 33, 1920.
- Walen, E. Dean and Fisher, R. T.: Fabric Fastenings. Rept. 37, 1920.
- Weaver, E. R.; Berry, W. M. and Bohnson, V. L.: The Ferrosilicon Process for the Generation of Hydrogen. I. Weaver, E. R. and Gordon, B. D.: II. Gordon, B. D.: III. Rept. 40, 1920.
- Anon.: Flexible Petrol Pipe. TM 31, July 1921.
- Anon.: The Potez Heavy Service Landing Gear - Hutchinson System. MP 11, Sept. 1922.
- Point, Mr.: Commercial Airplanes and Seaplanes. Thick Wings or Thin Wings. All Metal or Mixed Construction. TM 174, Dec. 1922.
- Hersey, M. D.: Diaphragms for Aeronautic Instruments. Rept. 165, 1923.
- Dunstan, A. E. and Thole, F. B.: Aviation Spirit - Past, Present and Future. TM 229, Sept. 1923.
- Britton, H. T. S.: Aero Dopes and Varnishes. TM 421, July 1927.
- Henrickson, H. B.: Tension Experiments on Diaphragm Metals. TN 261, Aug. 1927.
- From "Flight," May 9, 1929: Handley-Page Metal Construction. TM 533, Oct. 1929.
- Brombacher, W. G. and Melton, E. R.:
 Temperature Coefficient of the Modulus of Rigidity of Aircraft Instrument Diaphragm and Spring Materials.
 Rept. 358, 1930.
- Peck, William C.: Dynamic and Flight Tests on Rubber-Cord and Oleo-Rubber-Disk Landing Gears for an F6C-4 Airplane. Rept. 366, 1930.
- Schwartz, O.: The Relation Between the Tensile Strength and the Hardness of Metals. TM 552, Feb. 1930.
- Hohenemser, K.: Impact Tests on Rubber Compression Springs for Airplane Landing Gears. TM 572, July 1930.
- Matthaes, K.: The Influence of Notches Under Static Stress. TM 862, May 1938.

- Miscellaneous Types (Cont.)
- Paul, D. A. and Moore, R. L.: Cyclic Stress-Strain Studies of Metals in Torsion. TN 790, Dec. 1940.
- Clark, Donald S.: The Influence of Impact Velocity on the Tensile Characteristics of Some Aircraft Metals and Alloys. TN 868, Oct. 1942.
- Bobrowsky, A. R.; Kittel, J. Howard and Boegli, Charles P.: Experimental Study of the Coating Formed on Nitrided-Steel Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4C31 (WR E-143), March 1944.
- Boas, W. and Schmid, E.: The Surface Structure of Ground Metal Crystals. TM 1072, Aug. 1944.
- Turner, Philip S.; Doran, Jewel and Reinhart, Frank W.: Fairing Compositions for Aircraft Surfaces. TN 958, Nov. 1944.
- Kittel, J. Howard and Vierthaler, Walter
 A.: Experimental Study of the Coating
 Found on Scuffed Cast-Iron Piston
 Rings During Operation in NitridedSteel Cylinders. ACR E4K02 (WR
 E-29), Nov. 1944.
- Mebs, R. W. and McAdam, D. J., Jr.: Shear Elastic Properties of Some High Strength Nonferrous Metals as Affected by Plastic Deformation and by Heat Treatment. TN 967, Jan. 1945.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. IV - Electrocution Hazards from Inductive Voltages. ARR 4I28 (WR W-85), March 1945.

- Bisson, Edmond E. and Kessler, Harold D.: Tensile-Strength Investigation of Cast-Iron Piston Rings of Various Strengths. ARR E5B21 (WR E-86), March 1945.
- Axilrod, Benjamin M. and Koenig, Evelyn: Properties of Some Expanded Plastics and Other Low-Density Materials. TN 991, Sept. 1945.
- Nowick, A. S. and Machlin, E. S.: Quantitative Treatment of the Creep of Metals by Dislocation and Rate-Process Theories. Rept. 845, 1946.
- Graf, L.: On the Problem of Stress Corrosion. TM 1090, July 1946.
- Bollenrath, Franz: The Further Development of Heat-Resistant Materials for Aircraft Engines. TM 1093, Sept. 1946.
- Whitman, M. J. and Repko, A. J.: Oxidation of Titanium Carbide Base Ceramals Containing Molybdenum, Tungsten, and Cobalt. TN 1914, July 1949.
- Gwathmey, Allan T.; Leidheiser, Henry, Jr. and Smith, G. Pedro: Influence of Crystal Plane and Surrounding Atmosphere on Chemical Activities of Single Crystals of Metals. TN 1460, June 1948.
- Gwathmey, Allan T.; Leidheiser, Henry, Jr. and Smith, G. Pedro: Influence of Crystal Plane and Surrounding Atmosphere on Some Types of Friction and Wear Between Metals. TN 1461, June 1948.

Properties

(5.2)

- Merica, Paul D.: Aluminum and Its Light Alloys. Rept. 34, 1919.
- Edwards, Junius D. and Moore, Irwin L.: The Testing of Balloon Fabrics. Rept. 39, 1920.
- Silsbee, F. B.; Honaman, R. K.; Fonseca, E. L.; Bleininger, A. V. and Staley, H. F.: Properties and Preparation of Ceramic Insulators for Spark Plugs. Rept. 53, 1920.
- Allen, S. W. and Truax, T. R.: Glues Used in Airplane Parts. Rept. 66, 1920.
- Wilson, T. R. C.: The Effect of Kiln Drying on the Strength of Airplane Woods. Rept. 68, 1920.
- Stelmachowski, Ing.: Loads and Calculations of Army Airplanes. TN 28, Feb. 1921.
- Taken from "Flight" September 15, 1921: A Petrol-Proof Flexible Tubing at Last. An Invention of the Greatest Importance to Aviation. TM 48, Oct. 1921.
- Hersey, M. D.: Diaphragms for Aeronautic Instruments. Rept. 165, 1923.
- Dunston, A. E. and Thole, F. B.: Aviation Spirit - Past, Present and Future. TM 229, Sept. 1923.
- Pröll, A.: Experiments with Fabrics for Covering Airplane Wings to Determine Effect of Method of Installation. TN 168, Dec. 1923.
- Otey, N. S.: Torsional Strength of Nickel Steel and Duralumin Tubing as Affected by the Ratio of Diameter to Gage Thickness. TN 189, April 1924.
- Portevin, A. M. and DeFleury, R.: Ultra-Light Alloys and Their Utilization on Aircraft. TM 262, May 1924.
- Joachim, W. F. and Case, Harold W.: Tests of Several Bearing Materials Lubricated by Gasoline. TN 241, July 1926.
- From "Zeitschrift fur Flugtechnik und Motorluftschiffahrt," July 14, 1926: Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt," July 17, 1926, in Dusseldorf, Germany. TM 379, Sept. 1926.

- Markwardt, L. J.: Aircraft Woods: Their Properties, Selection, and Characteristics. Rept. 354, 1930.
- Brombacher, W. G. and Melton, E. R.: Temperature Coefficient of the Modulus of Rigidity of Aircraft Instrument Diaphragm and Spring Materials. Rept. 358, 1930.
- Peck, William C.: Dynamic and Flight Tests on Rubber-Cord and Oleo-Rubber-Disk Landing Gears for an F6C-4 Airplane. Rept. 366, 1930.
- Knight, Montgomery and Clay, William C.: Refrigerated Wind Tunnel Tests on Surface Coatings for Preventing Ice Formation. TN 339, May 1930.
- Smith, George Michael: Strength in Shear of Thin Curved Sheets of Alclad. TN 343, June 1930.
- De Ridder, E. I.: The Use of Elektron Metal in Airplane Construction. TM 608, Feb. 1931.
- Mutchler, Willard: The Weathering of Aluminum Alloy Sheet Materials Used in Aircraft. Rept. 490, 1934.
- Sullivan, J. E.: A Comparison of Corrosion-Resistant Steel (18 Percent Chromium 8 Percent Nickel) and Aluminum Alloy (24ST). TN 560, March 1936.
- Brueggeman, William C.: Mechanical Properties of Aluminum-Alloy Rivets. TN 585, Nov. 1936.
- Matthaes, K.: The Influence of Notches Under Static Stress. TM 862, May 1938.
- Riechers, K. and Olms, J.: Application and Testing of Transparent Plastics Used in Airplane Construction. TM 881, Nov. 1938.
- Fishbein, Meyer: Physical Properties of Synthetic Resin Materials. TN 694, March 1939.
- Coleman, Robert P.: Damping Formulas and Experimental Values of Damping in Flutter Models. TN 751, Feb. 1940.
- Paul, D. A. and Moore, R. L.: Cyclic Stress-Strain Studies of Metals in Torsion. TN 790, Dec. 1940.

- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Progress Report No. 1. Aircraft Spot Welding Research. OCR, May 1941.
- Kline, G. M.; Axilrod, B. M. and Turner, P. S.: Properties of Reinforced Plastics and Plastic Plywoods. ARR, July 1941.
- Eastwood, L. W. and Kempf, L. W.: Aluminum-Zinc-Magnesium-Copper Casting Alloys. ARR (WR W-31), July 1941.
- Moore, R. L.: Some Comparative Tests of Plain and Alclad 24S-T Sheet. TN 821, Aug. 1941.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Models Used in Aircraft - II. TN 842, Feb. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Progress Report No. 6. Examination of Spot Welds in Alclad 24S-T. OCR, March 1942.
- Hartmann, E. C. and Sharp, W. H.: A Summary of Results of Various Investigations of the Mechanical Properties of Aluminum Alloys at Low Temperatures. TN 843, May 1942.
- Walton, C. J. and Keller, F.: Procedure Used at Aluminum Research Laboratories for Determining Type of Attack in Some Aluminum Alloys. ARR (WR W-34), Aug. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Progress Report No. 9. An Investigation of Current Wave Form for Spot-Welding Alclad 24S-T, 0.020 Inch in Thickness. OCR, Nov. 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: Progress Report No. 10. The Surface Treatment of Alclad 24S-T Prior to Spot Welding. OCR, Dec. 1942.
- Kynoch, William and Patronsky, L. A.: Effect of Fillers and of Mixing Procedure on the Strength of Plastic Materials. TN 878, Jan. 1943.
- Moore, R. L.: Torsional Strength of Aluminum-Alloy Round Tubing. TN 879, Jan. 1943.
- Moore, R. L. and Paul, D. A.: Torsion Tests of 24S-T Aluminum-Alloy Noncircular Bar and Tubing. TN 885, Jan. 1943.

- Mebs, R. W. and McAdam, D. J., Jr.: Torsional Elastic Properties of 18:8
 Chromium-Nickel Steel as Affected by Plastic Deformation and by Heat Treatment. TN 886, Jan. 1943.
- Kies, J. A. and Holshouser, W. L.: Effects of Prior Fatigue-Stressing on the Impact Resistance of Chromium-Molybdenum Aircraft Steel. TN 889, March 1943.
- Findley, William N.: Mechanical Tests of Macerated Phenolic Molding Material. ARR 3F19 (WR W-99), June 1943.
- Hess, W. F.; Wyant, R. A.; Averbach, B. L. and Winsor, F. J.: Progress Report No. 13. Some Observations of Spot-Weld Consistency in Aluminum Alloys. OCR 3J20, Oct. 1943.
- Rinker, R. C.; Reinhart, F. W. and Kline, G. M.: Effect of pH on Strength of Resin Bonds. ARR 3J11 (WR W-46), Oct. 1943.
- Boelter, L. M. K.; Bromberg, R. and Gier, J. T.: An Investigation of Aircraft Heaters. XV - The Emissivity of Several Materials. ARR 4A21 (WR W-19), Jan. 1944.
- Mebs, R. W. and McAdam, D. J., Jr.: The Influence of Plastic Deformation and of Heat Treatment on Poisson's Ratio for 18:8 Chromium-Nickel Steel. TN 928, Feb. 1944.
- Bobrowsky, A. R.; Kittel, J. Howard and Boegli, Charles P.: Experimental Study of the Coating Formed on Nitrided-Steel Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4C31 (WR E-143), March 1944.
- The Surface Structure of Ground Metal Crystals. TM 1072, Aug. 1944.
- Hess, W. F.; Wyant, R. A.; Winsor, F. J. and Cook, H. C.: Progress Report No. 15 on Aircraft Spot-Welding Research. An Investigation of the Fatigue Strength of Spot Welds in the Aluminum Alloy Alclad 24S-T. OCR 4H23, Aug. 1944.
- Clark, Thomas P.: A Positive-Replica Technique for Examining Finished Metal Surfaces and Its Application to Aircraft-Engine Cylinders. RB E4I07 (WR E-107), Sept. 1944.
- Kittel, J. Howard and Vierthaler, Walter A.: Experimental Study of the Coating Found on Scuffed Cast-Iron Piston Rings During Operation in Nitrided-Steel Cylinders. ACR E4K02 (WR E-29), Nov. 1944.

- Turner, Philip S.; Doran, Jewel and Reinhart, Frank W.: Fairing Compositions for Aircraft Surfaces. TN 958, Nov. 1944.
- Templin, R. L. and Hartmann, E. C.: The Elastic Constants for Wrought Aluminum Alloys. TN 966, Jan. 1945.
- num Alloys. TN 966, Jan. 1945.

 Mebs, R. W. and McAdam, D. J., Jr.: Shear
 Elastic Properties of Some High
 Strength Nonferrous Metals as Affected
 by Plastic Deformation and by Heat
 Treatment. TN 967, Jan. 1945.
- Nowick, A. S. and Brockway, L. O.: An Electron-Diffraction Examination of Cast-Iron Piston Rings from Single-Cylinder Aircraft-Engine Tests. ACR E4J25 (WR E-144), Feb. 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 16. Further Investigation of the Effect of Spot Welds on the Sheet Efficiency of Alclad 24S-T. OCR 4J16, Feb. 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 18. The Spot Welding of Ten Aluminum Alloys in the 0.040-Inch Gage. OCR 5C26, July 1945.
- Kittel, J. Howard: Table of Interplaner Spacings for Crystal-Structure Determinations by X-ray Diffraction with Molybdenum, Copper, Cobalt, Iron, and Chromium Radiations. TN 1000, Aug. 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of a Large Forged Disc of CSA (234-A-5) Alloy. ARR 5H17 (WR W-73), Oct. 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: The Rupture Test Characteristics of Six Precision-Cast and Three Wrought Alloys at 1700° and 1800° F. ARR 5J16 (WR W-75), Nov. 1945.
- Freeman, J. W. and Cross, H. C.: A Metallurgical Investigation of a Large Forged Disc of Low-Carbon N-155 Alloy. ARR 5K20 (WR W-103), Dec. 1945.
- Rollin, Vern G.: The Effect of Liquid and Ice Particles on the Erosion of a Supercharger-Inlet Cover and Diffuser Vanes. MR E6E31 (WR E-178), June 1946.
- Graf, L. On the Problem of Stress Corrosion. TM 1090, July 1946.
- Clark, Thomas P. and Vierthaler, Walter A.: An Electron-Microscope Study of Used Nitrided-Steel Piston Rings. TN 1132, Sept. 1946.

- Bollenrath, Franz: The Further Development of Heat-Resistant Materials for Aircraft Engines. TM 1093, Sept. 1946.
- Moore, R. L.: Observations on the Behavior of Some Noncircular Aluminum Alloy Sections Loaded to Failure in Torsion. TN 1097, Feb. 1947.
- Harrison, W. N.; Moore, D. G. and Richmond, J. C.: Review of an Investigation of Ceramic Coatings for Metallic Turbine Parts and Other High-Temperature Applications. TN 1186, March 1947.
- Cross, Howard C. and Freeman, J. W.: A Metallurgical Investigation of Large Forged Discs of Low-Carbon N-155 Alloy. TN 1230, April 1947.
- Harris, Maxwell and Schlaff, Bernard A.:
 An Investigation of a Thermal Ice-Prevention System for a Cargo Airplane.
 VIII Metallurgical Examination of the Wing Leading-Edge Structure After 225
 Hours of Flight Operation of the Thermal System. TN 1235, April 1947.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: An Investigation of the High-Temperature Properties of Chromium-Base Alloys at 1350° F. TN 1314, June 1947.
- Rosenbaum, Burt M.: The Crystal Structure at Room Temperature of Six Cast Heat-Resisting Alloys. RM E7D23, June 1947.
- Good, J. N. and Godfrey, Douglas: Changes Found on Run-in and Scuffed Surfaces of Steel, Chrome Plate, and Cast Iron. TN 1432, Oct. 1947.
- Kittel, J. Howard: Comparison of Crystal Structures of 10 Wrought Heat-Resisting Alloys at Elevated Temperatures with Their Crystal Structures at Room Temperatures. TN 1488, Nov. 1947.
- Hoffman, Charles A. and Ault, G. Mervin: Application of Statistical Methods to the Study of Gas-Turbine Blade Failures. TN 1603, June 1948.
- Ilyushin, A. A.: The Theory of Plasticity in the Case of Simple Loading Accompanied by Strain-Hardening. TM 1207, Feb. 1949.
- Batdorf, S. B. and Budiansky, Bernard: A Mathematical Theory of Plasticity Based on the Concept of Slip. TN 1871, April 1949.
- Lidman, W. G. and Bobrowsky, A. R.: Correlation of Physical Properties of Ceramic Materials with Resistance to Fracture by Thermal Shock. TN 1918, July 1949.

TENSILE

(5.2.1)

- Walen, E. Dean: The Structure of Airplane Fabrics. Rept. 36, 1919.
- Edwards, Junius D. and Moore, Irwin L.: The Testing of Balloon Fabrics. Rept. 39, 1920.
- Unger, E. and Schmidt, E.: Duralumin. TN 8, July 1920.
- Woodward, R. W.: Recent Developments in Light Alloys. TM 3, Nov. 1920.
- Heim, A. L.; Knauss, A. C. and Seutter, Louis: Internal Stresses in Laminated Construction. Rept. 145, 1922.
- Gentzcke, Chief Engineer of the S-L Airship Company: Structural Methods
 Employed by the Schutte-Lanz Airship
 Company. TM 313, May 1925.
- Henrickson, H. B.: Tension Experiments on Diaphragm Metals. TN 261, Aug. 1927.
- Wolff, E. B. and Van Ewijk, L. J. G.: Mechanical Properties of Some Materials Used in Airplane Construction. TM 448, Jan. 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. I. Practical Aspects of the Problem. TN 282, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. II. Accelerated Corrosion Tests and the Behavior of High-Strength Aluminum Alloys of Different Compositions. TN 283, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. III. Effect of the Previous Treatment of Sheet Material on the Susceptibility to this Type of Corrosion. TN 284, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. IV. The Use of Protective Coatings. TN 285, April 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. VI. The Effect of Corrosion, Accompanied by Stress on the Tensile Properties of Sheet Duralumin. TN 305, May 1929.
- Markwardt, L. J.: Aircraft Woods: Their Properties, Selection, and Characteristics. Rept. 354, 1930.
- Schwartz, O.: The Relation Between the Tensile Strength and the Hardness of Metals. TM 552, Feb. 1930.

- Russell, H. W. and Welcker, W. A., Jr.: Endurance and Other Properties at Low Temperatures of Some Alloys for Aircraft Use. TN 381, June 1931.
- Brenner, Paul: Problems Involved in the Choice and Use of Materials in Airplane Construction. TM 658, Feb. 1932.
- Mutchler, Willard: The Weathering of Aluminum Alloy Sheet Materials Used in Aircraft. Rept. 490, 1934.
- Riechera, K.: Synthetic Resins in Aircraft Construction - Their Composition, Properties, Present State of Development and Application to Light Structures. TM 841, Nov. 1937.
- Kline, G. M.: Plastics as Structural Materials for Aircraft. TN 628, Dec. 1937.
- Kies, J. A. and Quick, G. W.: Effect of Service Stresses on Impact Resistance, X-ray Diffraction Patterns, and Microstructure of 258 Aluminum Alloy. Rept. 659, 1939.
- Mutchler, Willard: The Effect of Continuous Weathering on Light Metal Alloys Used in Aircraft. Rept. 663, 1939.
- McAdam, D. J., Jr. and Mebs, R. W.: Tensile Elastic Properties of 18:8
 Chromium-Nickel Steel as Affected by Plastic Deformation. Rept. 670, 1939.
- Fishbein, Meyer: Physical Properties of Synthetic Resin Materials. TN 694, March 1939.
- McAdam, D. J., Jr. and Mebs, R. W.: Tensile Elastic Properties of Typical Stainless Steels and Nonferrous Metals as Affected by Plastic Deformation and by Heat Treatment. Rept. 696, 1940.
- Mebs, R. W. and McAdams, D. J., Jr.: The Tensile Elastic Properties at Low Temperatures of 18:8 Cr-Ni Steel as Affected by Heat Treatment and Slight Plastic Deformation. TN 818, July 1941.
- Howell, F. M.: Variation of Properties Throughout Cross Section of Two Extruded Shapes. TN 826, Sept. 1941.
- Perkuhn, H.: The Creep of Laminated Synthetic Resin Plastics. TM 995, Nov. 1941.
- Aitchison, C. S. and Miller, James A.:
 Tensile and Pack Compressive Tests
 of Some Sheets of Aluminum Alloy,
 1025 Carbon Steel, and ChromiumNickel Steel. TN 840, Feb. 1942.

- Tensile (Cont.)
- Rossman, Carl A.: Tensile and Compressive Stress-Strain Curves and Flat-End Column Strength for Extruded Magnesium Alloy J-1. ARR (WR L-604), April 1942.
- Hartmann, E. C. and Sharp, W. H.: A Summary of Results of Various Investigations of the Mechanical Properties of Aluminum Alloys at Low Temperatures. TN 843, May 1942.
- Dolan, Thomas J.: Effects of Range of Stress and of Special Notches on Fatigue Properties of Aluminum Alloys Suitable for Airplane Propellers. TN 852, June 1942.
- Axilrod, B. M.; Turner, P. S.; Reinhart, F. W. and Kline, G. M.: Progress Report on Strength Properties of Plastic Panels Bonded with Cycleweld Adhesive. ACR, Sept. 1942.
- Axilrod, B. M.: Strength and Fatigue Tests on a Laminated Paper-Base Plastic Proposed for Use in Molding Propellers. ARR, Aug. 1942.
- Paul, D. A.: An Exploration of the Longitudinal Tensile and Compressive
 Properties Throughout an Extruded
 Shape of 24S-T Aluminum Alloy. TN
 877, Dec. 1942.
- White, A. E.; Freeman, J. W. and Rote, F. B.: Physical Data on Certain Alloys for High Temperature Applications. ACR 3D28 (WR W-80), April 1943.
- Ramberg, Walter and Osgood, William R.: Description of Stress-Strain Curves by Three Parameters. TN 902, July 1943.
- Kotanchik, Joseph N.; Woods, Walter and Zender, George W.: The Effect of Artificial Aging on the Tensile Properties of Alclad 24S-T and 24S-T Aluminum Alloy. RB 3H23 (WR L-257), Aug. 1943.
- Dolan, Thomas J.: Certain Mechanical Strength Properties of Aluminum Alloys 25S-T and X76S-T. TN 914, Oct. 1943.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 14. An Investigation of the Effect of Spot Welding on the Sheet Efficiency of Aluminum Alloy 24S-T Under Static Load. OCR 3J21, Oct. 1943.
- Aitchison, C. S. and Miller, James A.:
 Tensile and Compressive Tests of Magnesium Alloy J-1 Sheet. TN 913, Dec. 1943.

- Hill, H. N.: Determination of Stress-Strain Relations from "Offset" Yield Strength Values. TN 927, Feb. 1944.
- Schuette, Evan H.; Bartone, Leonard M. and Mandel, Merven W.: Tensile Tests of Round-Head, Flat-Head, and Brazier-Head Rivets. TN 930, March 1944.
- Freeman, J. W.; Rote, F. B. and White, A. E.: High Temperature Characteristics of 17 Alloys at 1200° and 1350° F. ACR 4C22 (WR W-93), March 1944.
- Mutchler, Willard: The Effect of Temperature on Sheet Metals for Airplane Firewalls. TN 965, Dec. 1944.
- Collins, John H., Jr.; Bisson, Edmond E. and Schmiedlin, Ralph F.: Nitrided-Steel Piston Rings for Engines of High Specific Power. Rept. 817, 1945.
- Templin, R. L. and Hartman, E. C.: The Elastic Constants for Wrought Aluminum Alloys. TN 966, Jan. 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 16. Further Investigation of the Effect of Spot Welds on the Sheet Efficiency of Alclad 24S-T. OCR 4J16, Feb. 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of a Large Forged Disc of 19-9 DL Alloy. ACR 5C10 (WR W-74), March 1945.
- Bisson, Edmond E. and Kessler, Harold D.: Tensile-Strength Investigation of Cast-Iron Piston Rings of Various Strengths. ARR E5B21 (WR E-86), March 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 18. The Spot Welding of Ten Aluminum Alloys in the 0.040-Inch Gage. OCR 5C26, July 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Progress Report No. 17. The Spot Welding of Multiple Thicknesses of 0.040-Inch Alclad 24S-T. OCR 5G13, Sept. 1945.
- Freeman, J. W. and Cross, H. C.: A
 Metallurgical Investigation of a Large
 Forged Disc of Low-Carbon N-155
 Alloy. ARR 5K20 (WR W-103), Dec.
 1945.
- Miller, James A.: Stress-Strain and Elongation Graphs for Aluminum Alloy R301 Sheet. TN 1010, Feb. 1946.
- Turner, P. S. and Thomason, R. H.: Correlation Between Strength Properties in Standard Test Specimens and Molded Phenolic Parts. TN 1005, May 1946.

Tensile (Cont.)

- Heimerl, George J. and Woods, Walter: Effect of Brake Forming on the Strength of 24S-T Aluminum-Alloy Sheet. TN 1072, May 1946.
- Geller, R. F. and Burdick, M. D.: Progress Report on Strength and Creep of Special Ceramic Bodies in Tension at Elevated Temperatures. ARR 6D24 (WR W-48), June 1946.
- Heimerl, George J. and Woods, Walter: Increasing the Compressive Strength of 24S-T Aluminum-Alloy Sheet by Flexure Rolling. TN 1119, Aug. 1946.
- Kunen, Alfred E.; Hartwig, Frederick J. and Bressman, Joseph R.: Tensile Properties of a Sillimanite Refractory at Elevated Temperatures. TN 1165, Nov. 1946.
- Woods, Walter and Heimerl, George J.: Effect of Brake Forming in Various Tempers on the Strength of Alclad 75S-T Aluminum-Alloy Sheet. TN 1162, Jan. 1947.
- Mebs, R. W. and McAdam, D. J., Jr.: Elastic Properties in Tension and Shear of High Strength Nonferrous Metals and Stainless Steel - Effect of Previous Deformation and Heat Treatment. TN 1100, March 1947.
- Harrison, W. N.; Moore, D. G. and Richmond, J. C.: Review of an Investigation of Ceramic Coatings for Metallic Turbine Parts and Other High-Temperature Applications. TN 1186, March 1947.
- Kline, G. M.; Reinhart, F. W.; Rinker, R. C. and De Lollis, N. J.: Effect of Catalysts and pH on Strength of Resin-Bonded Plywood. TN 1161, April 1947.
- Cross, Howard C. and Freeman, J. W.: A Metallurgical Investigation of Large Forged Discs of Low-Carbon N-155 Alloy. TN 1230, April 1947.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: An Investigation of the High-Temperature Properties of Chromium-Base Alloys at 1350° F. TN 1314, June 1947.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 75S-T Sheet. TN 1385, Nov. 1947.
- Hodge, Webster; Eastwood, L. W.; Lorig, C. H. and Cross, H. C.: Development of Cast Aluminum Alloys for Elevated-Temperature Service. TN 1444, Jan. 1948.

- Jackson, L. R.; Cross, H. C. and Berry, J. M.: Tensile, Fatigue, and Creep Properties of Forged Aluminum Alloys at Temperatures up to 800° F. TN 1469, March 1948.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T Sheet. TN 1512, May 1948.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T81 Sheet. TN 1513, May 1948.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Five Forged Gas-Turbine Discs of Timken Alloy. TN 1531, June 1948.
- Lamb, J. J.; Boswell, Isabelle and Axilrod, B. M.: Tensile and Compressive Properties of Laminated Plastics at High and Low Temperatures. TN 1550, July 1948.
- Findley, William N. and Worley, Will J.: Mechanical Properties of Five Laminated Plastics. TN 1560, Aug. 1948.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Two Contour-Forged Gas-Turbine Discs of 19-9DL Alloy. TN 1532, Sept. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Large Discs of CSA Alloy. TN 1533, Sept. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of a Contour-Forged Disc of EME Alloy. TN 1534, Nov. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Turbosupercharger Discs of 19-9DL Alloy. TN 1535, Nov. 1948.
- Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: Properties of 19-9DL Alloy Bar Stock at 1200° F. TN 1758, Nov. 1948.
- Freeman, J. W. and Cross, Howard C.: NACA and Office of Naval Research Metallurgical Investigation of Two Large Forged Discs of S-590 Alloy. TN 1760, Feb. 1949.
- Cross, Howard C. and Freeman, J. W.:
 Office of Naval Research and NACA
 Metallurgical Investigation of a Large
 Forged Disc of S-816 Alloy. TN 1765,
 Feb. 1949.

Tensile (Cont.)

- Dana, A. W.; Aul, E. L. and Sachs, G.:
 Tension Properties of Aluminum Alloys
 in the Presence of Stress-Raisers.
 I Effects of Triaxial Stress States on
 the Fracturing Characteristics of
 24S-T Aluminum Alloy. TN 1830,
 March 1949.
- Aul, E. L.; Dana, A. W. and Sachs, G.:
 Tension Properties of Aluminum
 Alloys in the Presence of StressRaisers. II Comparison of Notch
 Strength Properties of 24S-T, 75S-T,
 and 24S-T86 Aluminum Alloys. TN
 1831, March 1949.
- Hoffman, Charles A.; Ault, G. Mervin and Gangler, James J.: Initial Investigation of Carbide-Type Ceramal of 80-Percent Titanium Carbide Plus 20-Percent Cobalt for Use as Gas-Turbine-Blade Material. TN 1836, March 1949.
- DeLollis, N. J.; Rucker, Nancy and Wier, J. E.: Comparative Strengths of Some Adhesive-Adherend Systems. TN 1863, March 1949.
- Burdick, M. D.; Moreland, R. E. and Geller, R. F.: Strength and Creep Characteristics of Ceramic Bodies at Elevated Temperatures. TN 1561, April 1949.
- Cross, Howard C. and Freeman, J. W.:
 Office of Naval Research and NACA
 Metallurgical Investigation of a Large
 Forged Disc of Inconel X Alloy. TN
 1770, April 1949.
- Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: A Study of Effects of Heat Treatment and Hot-Cold-Work on Properties of Low-Carbon N-155 Alloy. TN 1867, May 1949.
- Deutsch, George C.; Repko, Andrew J. and Lidman, William G.: Elevated-Temperature Properties of Several Titanium Carbide Base Ceramals. TN 1915, July 1949.
- Gangler, James J.; Robards, Chester F. and McNutt, James E.: Physical Properties at Elevated Temperature of Seven Hot-Pressed Ceramics. TN 1911, July 1949.

COMPRESSIVE

(5.2.2)

- Pröll, A.: Testing Airplane Fabrics. TN 186, April 1924.
- Wolff, E. B. and Van Ewijk, L. J. G.: Mechanical Properties of Some Materials Used in Airplane Construction. TM 448, Jan. 1928.

- Markwardt, L. J.: Aircraft Woods: Their Properties, Selection, and Characteristics. Rept. 354, 1930.
- Hohenemser, K.: Impact Tests on Rubber Compression Springs for Airplane Landing Gears. TM 572, July 1930.
- Brenner, Paul: Problems Involved in the Choice and Use of Materials in Airplane Construction. TM 658, Feb. 1932.
- Riechera, K.: Synthetic Resins in Aircraft Construction - Their Composition, Properties, Present State of Development and Application to Light Structures. TM 841, Nov. 1937.
- Fishbein, Meyer: Physical Properties of Synthetic Resin Materials. TN 694, March 1939.
- Howell, F. M.: Variation of Properties
 Throughout Cross Section of Two Extruded Shapes. TN 826, Sept. 1941.
- Kollmann, Franz: The Mechanical Properties of Wood of Different Moisture Content Within -200° to +200° C Temperature Range. TM 984, Sept. 1941.
- Aitchison, C. S. and Miller, James A.:
 Tensile and Pack Compressive Test of
 Some Sheets of Aluminum Alloy, 1025
 Carbon Steel, and Chromium-Nickel
 Steel. TN 840, Feb. 1942.
- Rossman, Carl A.: Tensile and Compressive Stress-Strain Curves and Flat-End Column Strength for Extruded Magnesium Alloy J-1. ARR (WR L-604), April 1942.
- Hartmann, E. C. and Sharp, W. H.: A Summary of Results of Various Investigations of the Mechanical Properties of Aluminum Alloys at Low Temperatures. TN 843, May 1942.
- Axilrod, B. M.: Strength and Fatigue Tests on a Laminated Paper-Base Plastic Proposed for Use in Molding Propellers. ARR, Aug. 1942.
- Paul, D. A.: An Exploration of the Longitudinal Tensile and Compressive Properties Throughout an Extruded Shape of 24S-T Aluminum Alloy. TN 877, Dec. 1942.
- Ramberg, Walter and Osgood, William R.: Description of Stress-Strain Curves by Three Parameters. TN 902, July 1943.
- Moore, R. L. and Wescoat, C.: Bearing Strength of Some Wrought-Aluminum Alloys. TN 901, Aug. 1943.

Compressive (Cont.)

- Aitchison, C. S. and Miller, James A.: Tensile and Compressive Tests of Magnesium Alloy J-1 Sheet. TN 913, Dec. 1943.
- Moore, R. L. and Wescoat, C.: Bearing Strengths of Bare and Alclad XA75S-T and 24S-T81 Aluminum Alloy Sheet. TN 920, Dec. 1943.
- Hill, H. N.: Determination of Stress-Strain Relations from "Offset" Yield Strength Values. TN 927, Feb. 1944.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strength of Extruded XB75S-T Aluminum Alloy. RB L4E26, May 1944.
- Rafel, Norman and Schuette, Evan H.:
 Material Properties of Two Types of
 Plastic-Bonded Glass Cloth. RB
 L4H16 (WR L-225), Dec. 1944.
- Templin, R. L. and Hartmann, E. C.: The Elastic Constants for Wrought Aluminum Alloys. TN 966, Jan. 1945.
- Wescoat, C. and Moore, R. L.: Bearing Strengths of 75S-T Aluminum-Alloy Sheet and Extruded Angle. TN 974, Feb. 1945.
- Kotanchik, Joseph N.; Woods, Walter and Weinberger, Robert A.: Investigation of Methods of Supporting Single-Thickness Specimens in a Fixture for Determination of Compressive Stress-Strain Curves. RB L5E15 (WR L-189), May 1945.
- Moore, R. L. and Wescoat, C.: Bearing Strengths of 24S-T Aluminum Alloy Plate. TN 981, June 1945.
- Lundquist, Eugene E.; Schuette, Evan H.; Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials 24S-T Aluminum-Alloy Sheet. ARR L5F01 (WR L-190), June 1945.
- Heimerl, George J. and Roy, J. Albert:
 Column and Plate Compressive
 Strengths of Aircraft Structural Materials 17S-T Aluminum-Alloy Sheet.
 ARR L5F08 (WR L-20), June 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 75S-T Aluminum Alloy. ARR L5F08a (WR L-173), July 1945.
- Heimerl, George J. and Roy, J. Albert: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 24S-T Aluminum Alloy. ARR L5F08b (WR L-32), July 1945.

- Axilrod, Benjamin M. and Koenig, Evelyn: Properties of Some Expanded Plastics and Other Low-Density Materials. TN 991, Sept. 1945.
- Heimerl, George J. and Fay, Douglas P.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded R303-T Aluminum Alloy. ARR L5H04 (WR L-33), Oct. 1945.
- Leary, J. R. and Holt, Marshall: Column Strength of Extruded Magnesium Alloys AM-C58S and AM-C58S-T5. TN 994, Dec. 1945.
- Holt, Marshall and Leary, J. H.: The Column Strength of Aluminum Alloy 75S-T Extruded Shapes. TN 1004, Jan. 1946.
- Miller, James A.: Stress-Strain and Elongation Graphs for Aluminum Alloy R301 Sheet. TN 1010, Feb. 1946.
- Heimerl, George J. and Niles, Donald E.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 14S-T Aluminum Alloy. ARR L6C19 (WR L-284), May 1946.
- Heimerl, George J. and Woods, Walter: Effect of Brake Forming on the Strength of 24S-T Aluminum-Alloy Sheet. TN 1072, May 1946.
- Turner, P. S. and Thomason, R. H.: Correlation Between Strength Properties in Standard Test Specimens and Molded Phenolic Parts. TN 1005, May 1946.
- Heimerl, George J. and Woods, Walter: Increasing the Compressive Strength of 24S-T Aluminum-Alloy Sheet by Flexure Rolling. TN 1119, Aug. 1946.
- Heimerl, George J. and Niles, Donald E.: Column and Plate Compressive Strengths of Aircraft Structural Materials Extruded 0-1HTA Magnesium Alloy. TN 1156, Jan. 1947.
- Woods, Walter and Heimerl, George J.: Effect of Brake Forming in Various Tempers on the Strength of Alclad 75S-T Aluminum-Alloy Sheet. TN 1162, Jan. 1947.
- Moore, R. L.: Bearing Strength of Some Sand-Cast Magnesium Alloys. TN 1136, Feb. 1947.
- Kline, G. M.; Reinhart, F. W.; Rinker, R. C. and DeLollis, N. J.: Effect of Catalysts and pH on Strength of Resin-Bonded Plywood. TN 1161, April 1947.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 75S-T Sheet. TN 1385, Nov. 1947.

Compressive (Cont.)

- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T Sheet. TN 1512, May 1948.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T81 Sheet. TN 1513, May 1948.
- Lamb, J. J.; Boswell, Isabelle and Axilrod, B. M.: Tensile and Compressive Properties of Laminated Plastics at High and Low Temperatures. TN 1550, July 1948.
- Moore, R. L.: Bearing Tests of 14S Sheet and Plate. TN 1502, Aug. 1948.
- Moore, R. L.: Bearing Strengths of Some Aluminum-Alloy Sand Castings. TN 1523, Aug. 1948.
- Findley, William N. and Worley, Will J.: Mechanical Properties of Five Lami-nated Plastics. TN 1560, Aug. 1948.
- Moore, R. L.: Bearing Strengths of Some Aluminum-Alloy Rolled and Extruded Sections. TN 1503, Sept. 1948.
- Roberts, William M. and Heimerl, George J.: Elevated-Temperature Compressive Stress-Strain Data for 24S-T3 Aluminum-Alloy Sheet and Comparisons with Extruded 75S-T6 Aluminum Alloy. TN 1837, March 1949.

CREEP

(5.2.3)

- Henrickson, H. B.: Tension Experiments on Diaphragm Metals. TN 261, Aug. 1927.
- McAdam, D. J., Jr. and Mebs, R. W.: Ten-sile Elastic Properties of 18:8 Chromium-Nickel Steel as Affected by Plastic Deformation. Rept. 670, 1939.
- Muller, W.: Creep Strength of Stabilized Wrought-Aluminum Alloys. TM 960, Nov. 1940.
- Perkuhn, H.: The Creep of Laminated Synthetic Resin Plastics. TM 995, Nov. 1941.
- White, A. E.; Freeman, J. W. and Rote, F. B.: Physical Data on Certain Alloys for High Temperature Applications. ACR 3D28 (WR W-80), April 1943.
- Freeman, J. W.; Rote, F. B. and White, A. E.: High Temperature Characteristics of 17 Alloys at 1200° and 1350° F. ACR 4C22 (WR W-93), March 1944.

- Bradley, Kathryn H. and Axilrod, B. M.: Plastic Mountings for Aircraft Windshields. TN 936, May 1944.
- Rafel, Norman and Schuette, Evan H.: Material Properties of Two Types of Plastic-Bonded Glass Cloth. RB L4H16 (WR L-225), Dec. 1944.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of a Large Forged Disc of 19-9DL Alloy. ACR 5C10 (WR W-74), March 1945.
- Freeman, J. W. and Cross, H. C.: A Metallurgical Investigation of a Large Forged Disc of Low-Carbon N-155 Alloy. ARR 5K20 (WR W-103), Dec. 1945.
- Nowick, A. S. and Machlin, E. S.: Quantitative Treatment of the Creep of Metals by Dislocation and Rate-Process Theories. Rept. 845, 1946.
- Geller, R. F. and Burdick, M. D.: Progress Reports on Strength and Creep of Special Ceramic Bodies in Tension at Elevated Temperatures. ARR 6D24 (WR W-48), June 1946.
- Marin, Joseph: Static and Dynamic Creep Properties of Laminated Plastics for Various Types of Stress. TN 1105, Feb. 1947.
- Mebs, R. W. and McAdam, D. J., Jr.: Elastic Properties in Tension and Shear of High Strength Nonferrous Metals and Stainless Steel - Effect of Previous Deformation and Heat Treatment. TN 1100, March 1947.
- Cross, Howard C. and Freeman, J. W.: A Metallurgical Investigation of Large Forged Discs of Low-Carbon N-155 Alloy. TN 1230, April 1947.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: An Investigation of the High-Temperature Properties of Chromium-Base Alloys at 1350° F. TN 1314, June 1947.
- Hodge, Webster; Eastwood, L. W.; Lorig, C. H. and Cross, H. C .: Development of Cast Aluminum Alloys for Elevated-Temperature Service. TN 1444, Jan. 1948.
- Machlin, E. S.: Dislocation Theory of the Fatigue of Metals. TN 1489, Jan. 1948.
- Jackson, L. R.; Cross, H. C. and Berry, J. M.: Tensile, Fatigue, and Creep Properties of Forged Aluminum Alloys at Temperatures up to 800° F. TN 1469, March 1948.

Creep (Cont.)

- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Five Forged Gas-Turbine Discs of Timken Alloy. TN 1531, June 1948.
- Schlaff, Bernard A. and Selna, James: An Investigation of a Thermal Ice-Prevention System for a Cargo Airplane.
 IX The Temperature of the Wing Leading-Edge Structure as Established in Flight. TN 1599, June 1948.
- Findley, William N. and Worley, Will J.: Mechanical Properties of Five Laminated Plastics. TN 1560, Aug. 1948.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Two Contour-Forged Gas-Turbine Discs of 19-9DL Alloy. TN 1532, Sept. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Large Discs of CSA Alloy. TN 1533, Sept. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of a Contour-Forged Disc of EME Alloy. TN 1534, Nov. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Turbosupercharger Discs of 19-9DL Alloy. TN 1535, Nov. 1948.
- Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: Properties of 19-9DL Alloy Bar Stock at 1200° F. TN 1758, Nov. 1948.
- Freeman, J. W. and Cross, Howard C.: NACA and Office of Naval Research Metallurgical Investigation of Two Large Forged Discs of S-590 Alloy. TN 1760, Feb. 1949.
- Cross, Howard C. and Freeman, J. W.: Office of Naval Research and NACA Metallurgical Investigation of a Large Forged Disc of S-816 Alloy. TN 1765, Feb. 1949.
- Burdick, M. D.; Moreland, R. E. and Geller, R. F.: Strength and Creep Characteristics of Ceramic Bodies at Elevated Temperatures. TN 1561, April 1949.
- Cross, Howard C. and Freeman, J. W.:
 Office of Naval Research and NACA
 Metallurgical Investigation of a Large
 Forged Disc of Inconel X Alloy. TN
 1770, April 1949.

Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: A Study of Effects of Heat Treatment and Hot-Cold-Work on Properties of Low-Carbon N-155 Alloy. TN 1867, May 1949.

STRESS-RUPTURE

(5.2.4)

- Axilrod, Benjamin M. and Kline, Gordon M.: Resistance of Transparent Plastics to Impact. TN 718, July 1939.
- Clark, Donald S.: The Influence of Impact Velocity on the Tensile Characteristics of Some Aircraft Metals and Alloys. TN 868, Oct. 1942.
- White, A. E.; Freeman, J. W. and Rote, F. B.: Physical Data on Certain Alloys for High Temperature Applications. ACR 3D28 (WR W-80), April 1943.
- Rinker, R. C.; Reinhart, F. W. and Kline, G. M.: Effect of pH on Strength of Resin Bonds. ARR 3J11 (WR W-46), Oct. 1943.
- Freeman, J. W.; Rote, F. B. and White, A. E.: High Temperature Characteristics of 17 Alloys at 1200° and 1350° F. ACR 4C22 (WR W-93), March 1944.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of a Large Forged Disc of 19-9 DL Alloy. ACR 5C10 (WR W-74), March 1945.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: The Rupture Test Characteristics of Six Precision-Cast and Three Wrought Alloys at 1700° and 1800° F. ARR 5J16 (WR W-75), Nov. 1945.
- Freeman, J. W. and Cross, H. C.: A
 Metallurgical Investigation of a Large
 Forged Disc of Low-Carbon N-155
 Alloy. ARR 5K20 (WR W-103), Dec.
 1945.
- Turner, P. S. and Thomason, R. H.: Correlation Between Strength Properties in Standard Test Specimens and Molded Phenolic Parts. TN 1005, May 1946.
- Geller, R. F. and Burdick, M. D.: Progress Reports on Strength and Creep of Special Ceramic Bodies in Tension at Elevated Temperatures. ARR 6D24 (WR W-48), June 1946.
- Lamb, J. J.; Albrecht, Isabelle and Axilrod, B. M.: Impact Strength and Flexural Properties of Laminated Plastics at High and Low Temperatures. TN 1054, Aug. 1946.

- Stress-Rupture (Cont.)
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: Evaluation of Two High-Carbon Precision-Cast Alloys at 1700° and 1800° F by the Rupture Test. TN 1130, Sept. 1946.
- Machlin, E. S. and Nowick, A. S.: Stress Rupture of Heat-Resisting Alloys as a Rate Process. TN 1126, Sept. 1946.
- Cross, Howard C. and Freeman, J. W.:
 A Metallurgical Investigation of Large
 Forged Discs of Low-Carbon N-155
 Alloy. TN 1230, April 1947.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: An Investigation of the High-Temperature Properties of Chromium-Base Alloys at 1350° F. TN 1314, June 1947.
- Lidman, William G.: Determination of Stress-Rupture Parameters for Four Heat-Resisting Alloys. RM E7G18a, Aug. 1947.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: The 1350° F Stress-Rupture Properties of Two Wrought Alloys and Three Cast Alloys. TN 1380, Nov. 1947.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 75S-T Sheet. TN 1385, Nov. 1947.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: The Rupture-Test Characteristics of Heat-Resistant Sheet Alloys at 1700° and 1800° F. TN 1465, Feb. 1948.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T Sheet. TN 1512, May 1948.
- Miller, James A.: Stress-Strain and Elongation Graphs for Alclad Aluminum-Alloy 24S-T81 Sheet. TN 1513, May 1948.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Five Forged Gas-Turbine Discs of Timken Alloy. TN 1531, June 1948.
- Freeman, J. W.; Reynolds, E. E. and White, A. E.: A Metallurgical Investigation of Two Contour-Forged Gas-Turbine Discs of 19-9DL Alloy. TN 1532, Sept. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Large Discs of CSA Alloy. TN 1533, Sept. 1948.

- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of a Contour-Forged Disc of EME Alloy. TN 1534, Nov. 1948.
- Reynolds, E. E.; Freeman, J. W. and White, A. E.: A Metallurgical Investigation of Two Turbosupercharger Discs of 19-9DL Alloy. TN 1535, Nov. 1948.
- Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: Properties of 19-9DL Alloy Bar Stock at 1200° F. TN 1758, Nov. 1948.
- Freeman, J. W. and Cross, Howard C.: NACA and Office of Naval Research Metallurgical Investigation of Two Large Forged Discs of S-590 Alloy. TN 1760, Feb. 1949.
- Cross, Howard C. and Freeman, J. W.: Office of Naval Research and NACA Metallurgical Investigation of a Large Forged Disc of S-816 Alloy. TN 1765, Feb. 1949.
- Cross, Howard C. and Freeman, J. W.:
 Office of Naval Research and NACA
 Metallurgical Investigation of a Large
 Forged Disc of Inconel X Alloy. TN
 1770, April 1949.
- Freeman, J. W.; Reynolds, E. E.; Frey, D. N. and White, A. E.: A Study of Effects of Heat Treatment and Hot-Cold-Work on Properties of Low-Carbon N-155 Alloy. TN 1867, May 1949.

FATIGUE

(5.2.5)

- Woodward, R. W.: Recent Developments in Light Alloys. TM 3, Nov. 1920.
- Anon.: Fatigue Resistance of Duralumin. TM 135, Sept. 1922.
- Dumanois, P.: Fatigue of Internal Combustion Engines. TM 259, April 1924.
- Russell, H. W. and Welcker, W. A., Jr.: Endurance and Other Properties at Low Temperatures of Some Alloys for Aircraft Use. TN 381, June 1931.
- Brenner, Paul: Problems Involved in the Choice and Use of Materials in Airplane Construction. TM 658, Feb. 1932.
- Matthaes, Kurt: Fatigue Strength of Airplane and Engine Materials. TM 743, April 1934.
- Goodyear-Zeppelin Corporation: Preliminary Fatigue Studies on Aluminum Alloy Aircraft Girders. TN 637, Feb. 1938.

- Fatigue (Cont.)
- Kies, J. A. and Quick, G. W.: Effect of Service Stresses on Impact Resistance, X-Ray Diffraction Patterns, 2 and Microstructure of 25S Aluminum Alloy. Rept. 659, 1939.
- Fishbein, Meyer: Physical Properties of Synthetic Resin Materials. TN 694, March 1939.
- Stickley, G. W.: Effect of Alternately High and Low Repeated Stresses upon the Fatigue Strength of 25ST Aluminum Alloy. TN 792, Jan. 1941
- Bollenrath, F.: Factors Influencing the Fatigue Strength of Materials, TM 987, Sept. 1941.
- Bürnheim, H.: Effect of Threaded and Serrated Holes on the Limited Time and Fatigue Strength of Flat Light-Alloy Strips. TM 994, Nov. 1941.
- Stickley, G. W.: The Fatigue Strengths of Some Wrought Aluminum Alloys. RB (WR W-83), June 1942.
- Dolan, Thomas J.: Effects of Range of Stress and of Special Notches on Fatigue Properties of Aluminum Alloys Suitable for Airplane Propellers. TN 852, June 1942.
- Stickley, G. W.: Improvement of Fatigue Life of an Aluminum Alloy by Overstressing. TN 857, Aug. 1942.
- Hartmann, E. C. and Stickley, G. W.: The Direct-Stress Fatigue Strength of 17S-T Aluminum Alloy Throughout the Range from 1/2 to 500,000,000 Cycles of Stress. TN 865, Nov. 1942.
- Russell, H. W. and Jackson, L. R.: Progress Report on Fatigue of Spot-Welded Aluminum. ARR (WR W-38), Feb. 1943.
- Dolan, Thomas J.: Certain Mechanical Strength Properties of Aluminum Alloys 25S-T and X76S-T. TN 914, Oct. 1943.
- Russell, H. W.; Gillett, H. W.; Jackson, L. R. and Foley, G. M.: The Effect of Surface Finish on the Fatigue Performance of Certain Propeller Materials. TN 917, Dec. 1943.
- Russell, H. W.: Fatigue Strength and Related Characteristics of Spot-Welded Joints in 24S-T Alclad Sheet. ARR 3L01 (WR W-61), Dec. 1943.
- Brueggeman, W. C. and Mayer, M., Jr.:
 Guides for Preventing Buckling in
 Axial Fatigue Tests of Thin SheetMetal Specimens. TN 931, April 1944.

- Bradley, Kathryn H. and Axilrod, B. M.: Plastic Mountings for Aircraft Windshields. TN 936, May 1944.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Joints in 24S-T Alclad Sheet. ARR 4E30 (WR W-63), May 1944.
- Hess, W. F.; Wyant, R. A.; Winsor, F. J. and Cook, H. C.: An Investigation of the Fatigue Strength of Spot Welds in the Aluminum Alloy Alclad 24S-T. OCR Progress Rept. 15, Aug. 1944.
- Bennett, John A.: Early Detection of Cracks Resulting from Fatigue Stressing. RB 4I15 (WR W-78), Sept. 1944.
- Hartmann, E. C.; Lyst, J. O. and Andrews, H. J.: Fatigue Tests of Riveted Joints Progress Report of Tests of 17S-T and 53S-T Joints. ARR 4I15 (WR W-55), Sept. 1944.
- Rhode, Richard V. and Donely, Philip: Frequency of Occurrence of Atmospheric Gusts and of Related Loads on Airplane Structures. ARR L4I21 (WR L-121), Nov. 1944.
- Brueggeman, W. C.; Mayer, M., Jr. and Smith, W. H.: Axial Fatigue Tests at Zero Mean Stress of 24S-T Aluminum-Alloy Sheet With and Without a Circular Hole. TN 955, Nov. 1944.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Aircraft Joints. I Comparison of Spot-Weld and Rivet Patterns in 24S-T Alclad Sheet Comparison of 24S-T Alclad and 75S-T Alclad. ARR 4F01 (WR W-56), Dec. 1944.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.
- Hess, W. F.; Wyant, R. A. and Winsor, F. J.: Further Investigation of the Effect of Spot Welds on the Sheet Efficiency of Alclad 24S-T. OCR 4J16 Progress Rept. 16, Feb. 1945.
- Andrews, H. J. and Holt, M.: Fatigue Tests on 1/8-Inch Aluminum Alloy Rivets. TN 971, Feb. 1945.
- Brueggeman, W. C.; Mayer, M., Jr. and Smith, W. H.: Axial Fatigue Tests at Two Stress Amplitudes of 0.032-Inch 24S-T Sheet Specimens with a Circular Hole. TN 983, July 1945.

Fatigue (Cont.)

- Moore, R. L. and Hill, H. N.: Comparative Fatigue Tests of Riveted Joints of Alclad 24S-T, Alclad 24S-T81, Alclad 24S-RT, Alclad 24S-T86, and Alclad 75S-T Sheet. RB 5F11 (WR W-76), Aug. 1945.
- Nettles, J. C. and Meyer, André J., Jr.: Piston-Ring Vibration and Breakage. ARR E5G06 (WR E-44), Aug. 1945.
- Jackson, L. R. and Grover, H. J.: The Application of Data on Strength Under Repeated Stresses to the Design of Aircraft. ARR 5H27 (WR W-91), Oct. 1945.
- Bennet, J. A.: Effect of Fatigue-Stressing Short of Failure on Some Typical Aircraft Metals. TN 992, Oct. 1945.
- Putnam, Abbott A. and Reisert, Thomas D.: An Analysis of the Fatigue Life of an Airplane Wing Structure Under Overload Conditions. RB L5K29 (WR L-10), Feb. 1946.
- Crate, Harold; Ochiltree, David W. and Graves, Walter T.: Effect of Ratio of Rivet Pitch to Rivet Diameter on the Fatigue Strength of Riveted Joints of 24S-T Aluminum-Alloy Sheet. TN 1125, Sept. 1946.
- Machlin, E. S.: Dislocation Theory of the Fatigue of Metals. TN 1489, Jan. 1948.
- Russell, H. W.; Jackson, L. R.; Grover, H. J. and Beaver, W. W.: Fatigue Strength and Related Characteristics of Aircraft Joints. II Fatigue Characteristics of Sheet and Riveted Joints of 0.040-Inch 24S-T, 75S-T, and R303-T275 Aluminum Alloys. TN 1485, Feb. 1948.
- Jackson, L. R.; Cross, H. C. and Berry, J. M.: Tensile, Fatigue, and Creep Properties of Forged Aluminum Alloys at Temperatures up to 800° F. TN 1469, March 1948.
- Voldrich, C. B. and Armstrong, E. T.:
 Effect of Variables in Welding Technique on the Strength of Direct-Current Metal-Arc-Welded Joints in Aircraft Steel. II Repeated-Stress Tests of Joints in SAE 4130 Seamless Steel Tubing. TN 1262, April 1948.
- Howell, F. M.; Stickley, G. W. and Lyst, J. O.: Effects of Surface Finish, of Certain Defects, and of Repair of Defects by Welding on Fatigue Strength of 355-T6 Sand-Castings and Effects of Prior Fatigue Stressing on Tensile Properties. TN 1464, April 1948.

- Brueggeman, W. C. and Mayer, M., Jr.: Axial Fatigue Tests at Zero Mean Stress of 24S-T and 75S-T Aluminum-Alloy Strips with a Central Circular Hole. TN 1611, Aug. 1948.
- Langdon, Howard H. and Fried, Bernard: Fatigue of Gusseted Joints. TN 1514, Sept. 1948.
- Marin, Joseph and Shelson, William: Biaxial Fatigue Strength of 24S-T Aluminum Alloy. TN 1889, May 1949.

SHEAR

(5.2.6)

- DeLollis, N. J.; Rucker, Nancy and Wier, J. E.: Comparative Strengths of Some Adhesive-Adherend Systems. TN 1863, March 1949.
- Deutsch, George C.; Repko, Andrew J. and Lidman, William G.: Elevated-Temperature Properties of Several Titanium Carbide Base Ceramals. TN 1915, July 1949.

FLEXURAL

(5.2.7)

- Axilrod, B. M.; Turner, P. S.; Reinhart, F. W. and Kline, G. M.: Progress Report on Strength Properties of Plastic Panels Bonded with Cycleweld Adhesive. ACR, Sept. 1942.
- Crouse, W. A.; Caudill, D. C. and Reinhart, F. W.: Effect of Simulated Service Conditions on Plastics During Accelerated and 2-Year Weathering Tests. TN 1438, May 1948.

CORROSION RESISTANCE

(5.2.8)

- Buzzard, R. W. and Mutchler, W. H.: Advantages of Oxide Films as Bases for Aluminum Pigmented Surface Coatings for Aluminum Alloys. TN 400, Nov. 1931.
- Sakmann, B. W. and Rightmire, B. G.: An Investigation of Fretting Corrosion Under Several Conditions of Oxidation. TN 1492, June 1948.
- Moore, D. G.; Bolz, L. H. and Harrison, W. N.: A Study of Ceramic Coatings for High-Temperature Protection of Molybdenum. TN 1626, July 1948.
- Moore, D. G.; Richmond, J. C. and Harrison, W. N.: High-Temperature Attack of Various Compounds on Four Heat-Resisting Alloys. TN 1731, Oct. 1948.

Corrosion Resistance (Cont.)

- Holdaway, George H.: Corrosion Tests of a Heated Wing Utilizing an Exhaust-Gas-Air Mixture for Ice-Prevention. TN 1791, Jan. 1949.
- Whitman, M. J. and Repko, A. J.: Oxidation of Titanium Carbide Base Ceramals Containing Molybdenum, Tungsten, and Cobalt. TN 1914, July 1949.

STRUCTURE

(5.2.9)

- Brueggeman, William C.: Progress Summary No. 1. Mechanical Properties of Flush-Riveted Joints Submitted by Five Airplane Manufacturers. RB (WR W-79), Feb. 1942.
- Kittel, J. Howard: Table of Interplaner Spacings for Crystal-Structure Determinations by X-Ray Diffraction with Molybdenum, Copper, Cobalt, Iron, and Chromium Radiations. TN 1000, Aug. 1945.
- Kittel, J. Howard: The Crystal Structure at Room Temperature of Eight Forged Heat-Resisting Alloys. TN 1102, July 1946.
- Rosenbaum, Burt M.: The Crystal Structure at Room Temperature of Six Cast Heat-Resisting Alloys. RM E7D23, June 1947.

- Kittel, J. Howard: Comparison of Crystal Structures of 10 Wrought Heat-Resisting Alloys at Elevated Temperatures with Their Crystal Structures at Room Temperatures. TN 1488, Nov. 1947.
- Rosenbaum, B. M.: X-Ray Diffraction Investigation of Minor Phases of High-Temperature Alloys. TN 1580, July 1948.
- Leichter, M.: Theoretical Study of the Diffusion Constant for Self-Diffusion in Metals. TN 1856, April 1949.
- Frey, D. N.; Freeman, J. W. and White, A. E.: Fundamental Effects of Aging on Creep Properties of Solution-Treated Low-Carbon N-155 Alloy. TN 1940, Aug. 1949.

EFFECTS OF NUCLEAR RADIATION

(5.2.10)

Allen, G.: Analytical Method for Determining Transmission and Absorption of Time-Dependent Radiation Through Thick Absorbers. I - Radioactivity of Absorber, Time-Dependent. TN 1919, Aug. 1949.

Operating Stresses and Conditions

(5.3)

- Hall, Charles Ward: Structural Weight of Aircraft as Affected by the System of Design. TN 206, Nov. 1924.
- Constantin, L.: Tail Planes. TM 373, Aug. 1926.
- Nelson, Lieut. Comdr. Wm. (CC), USN: Duralumin Welding. TM 399, Feb. 1927.
- Nelson, Lieut. Comdr. Wm. (CC), USN: The Protection of Duralumin from Corrosion. TM 404, March 1927.
- Nelson, Lieut. Comdr. Wm. (CC), USN: Duralumin and Its Corrosion. TM 408, April 1927.
- Miller, W. B.: Welding of High Chromium Steels. TN 290, June 1928.
- Rawdon, Henry S.: Corrosion Embrittlement of Duralumin. V - Results of Weather-Exposure Tests. TN 304, Feb. 1929.
- Russell, H. W. and Welcker, W. A., Jr.: Endurance and Other Properties at Low Temperatures of Some Alloys for Aircraft Use. TN 381, June 1931.
- Mutchler, Willard and Galvin, W. G.: Tidewater and Weather-Exposure Tests on Metals Used in Aircraft. TN 736, Nov. 1939.
- Brueggeman, W. C.; Krupen, P. and Roop, F. C.: Axial Fatigue Tests of 10 Airplane Wing-Beam Specimens by the Resonance Method. TN 959, Dec. 1944.
- Bisson, Edmond E. and Kessler, Harold D.: Tensile Strength Investigation of Cast-Iron Piston Rings of Various Strengths. ARR E5B21 (WR E-86), March 1945.
- Winston, A. W.: Effect of Aging Aircraft Structures on Magnesium Parts. TN 979, April 1945.
- Dutee, Francis J.; Phillips, Franklyn W. and Calvert, Howard F.: Operating Stresses in Aircraft-Engine Crankshafts and Connecting Rods. II Instrumentation and Test Results. MR E5H18 (WR E-191), Aug. 1945.

- Axilrod, Benjamin M. and Koenig, Evelyn: Properties of Some Expanded Plastics and Other Low-Density Materials. TN 991, Sept. 1945.
- Sachs, George; Smith, Charles S.; Lubahn, Jack D.; Davis, Gordon E. and Ebert, Lynn J.: Nondestructive Measurement of Residual and Enforced Stresses by Means of X-Ray Diffraction. II - Some Applications to Aircraft Problems. TN 987, Nov. 1945.
- Jones, Alun R.: An Investigation of a Thermal Ice-Prevention System for a Twin-Engine Transport Airplane (Based on Previously Issued Reports ARR's 5A03a, b, c, 5C20, 5D06, 5G20). Rept. 862, 1946.
- Warshawsky, Isidore: A Multiple Bridge for Elimination of Contact-Resistance Errors in Resistance Strain-Gage Measurements. TN 1031, March 1946.
- Mutchler, Willard: Marine Exposure Tests on Stainless Steel Sheet. TN 1095, Feb. 1947.
- Crouse, W. A.; Caudill, D. C. and Reinhart, F. W.: Effect of Simulated Service Conditions on Plastics. TN 1240, July 1947.
- Holms, Arthur G. and Jenkins, Joseph E.: Effect of Strength and Ductility on Burst Characteristics of Rotating Disks. TN 1667, July 1948.
- Tendeland, Thorval and Schlaff, Bernard A.: Temperature Gradients in the Wing of a High-Speed Airplane During Dives from High Altitudes. TN 1675, July 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Martin M-130 Airplanes in Commercial Transport Operation. TN 1693, Sept. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Sikorsky S-42A Airplanes in Commercial Transport Operation. TN 1733, Oct. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-2 Airplanes in Commercial Transport Operation. TN 1754, Nov. 1948.

Walker, Walter G. and Hadlock, Ivan K.:
An Analysis of the Airspeeds and Normal Accelerations of Boeing B-247
and B-247D Airplanes in Commercial
Transport Operation. TN 1783, Dec.
1948.

AIRFRAME

(5.3.1)

- Edwards, Junius D. and Moore, Irwin L.: The Testing of Balloon Fabrics. Rept. 39, 1920.
- Wendt, F.: The Establishment of Standards in Airplane Construction. MP 4, May 1921.
- Lewe, Victor: Shape and Strength of Seaplane Under-Structures with Special Regard to Seaworthiness. TM 37, Aug. 1921.
- Pröll, A.: Experiments with Fabrics for Covering Airplane Wings to Determine Effect of Method of Installation. TN 168, Dec. 1923.
- Peck, William C. and Beard, Albert P.: Static, Drop, and Flight Tests on Musselman Type Airwheels. Rept. 381, 1931.
- Kussner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. TM 716, July 1933.
- Kussner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. Part II. Loading Conditions in Germany (Continued), England, and the United States. TM 717, July 1933.
- Kussner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. Part III. Loading Conditions in France, Italy, Holland, and Russia Aims at Standardization. TM 718, Aug. 1933.
- Rhode, Richard V.: The Influence of Tip Shape on the Wing Load Distribution as Determined by Flight Tests. Rept. 500, 1934.
- Wetmore, J. W.: The Rolling Friction of Several Airplane Wheels and Tires and the Effect of Rolling Friction on Take-Off. Rept. 583, 1937.
- Manson, S. S.: Charts for Rapid Analysis of 45° Strain-Rosette Data. TN 940, May 1944.

- Manson, S. S.: An Automatic Electrical Analyzer for 45° Strain-Rosette Data. TN 941, May 1944.
- Rhode, Richard V. and Donely, Philip: Frequency of Occurrence of Atmospheric Gusts and of Related Loads on Airplane Structures. ARR L4I21 (WR L-121), Nov. 1944.
- Savelyev, V. V.: Distribution of Structural Weight of Wing Along the Span. TM 1086, Aug. 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- Benscoter, Stanley U.: Effect of Partial Wing Lift in Seaplane Landing Impact. TN 1563, April 1948.

PROPULSION SYSTEM

(5.3.2)

- Cragoe, C. S.: Temperatures in Spark Plugs Having Steel and Brass Shells. Rept. 52, 1920.
- Margoulis, W.: The Steadiness Factor in Engine Sets. TN 19, Dec. 1920.
- Becker, G.: Engine Pistons of Light Metal. TM 102, June 1922.
- Dumanois, P.: Fatigue of Internal Combustion Engines. TM 259, April 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - I. Materials. TN 198, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - II. Method of Construction. TN 199, Aug. 1924.
- Caldwell, F. W. and Clay, N. S.: Micarta Propellers - IV. Technical Methods of Design. TN 201, Sept. 1924.
- Joachim, W. F.: An Investigation of the Characteristics of Steel Diaphragms for Automatic Fuel-Injection Valves. TN 234, April 1926.
- Lürenbaum, Karl: Torsional Vibration of Aircraft Engines. TM 672, May 1932.
- Marti, Willy: Valve-Spring Surge. TM 818, March 1937.
- Kraemer, Otto: Heat-Stressed Structural Components in Combustion-Engine Design. TM 875, Sept. 1938.

- Meyer, J.: The Coupling of Flexural Propeller Vibrations with the Torsional Crankshaft Vibrations. TM 1051, Dec. 1943.
- Kuhn, M.: Piston Ring Pressure Distribution. TM 1056, Dec. 1943.
- Ebihara, Keikiti: Researches on the Piston Ring. TM 1057, Feb. 1944.
- Manson, S. S.: Charts for Rapid Analysis of 45° Strain-Rosette Data. TN 940, May 1944.
- Manson, S. S.: An Automatic Electrical Analyzer for 45° Strain-Rosette Data. TN 941, May 1944.
- Nettles, J. C. and Meyer, André J., Jr.: Piston-Ring Vibration and Breakage. ARR E5G06 (WR E-44), Aug. 1945.
- Meyer, Andre J., Jr.: Elimination of Galling of Pendulum-Vibration Dampers Used in Aircraft Engines. ARR E5G31 (WR E-71), Aug. 1945.
- Shaw, Milton C. and Macks, E. Fred.:
 Radial Aircraft-Engine Bearing Loads.
 I Crankpin-Bearing Loads for
 Engines Having Nine Cylinders per
 Crankpin. ARR E5H04 (WR E-26),
 Oct. 1945.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft-Engine Bearing Loads. I - Crankpin-Bearing Loads. ARR E5H10a (WR E-67), Oct. 1945.
- Shaw, Milton C. and Macks, E. Fred: In-Line Aircraft-Engine Bearing Loads. II - Blade-Bearing Loads. ARR E5H10b (WR E-46), Oct. 1945.
- Johnson, Robert L. and Swikert, Max: Single-Cylinder Oil-Control Tests of Porous Chrome-Plated Cylinder Barrels for Radial Air-Cooled Engines. ARR E5L18 (WR E-25), Jan. 1946.
- Holms, Arthur G. and Faldetta, Richard D.: Strain-Gage Study of Internally Cooled Exhaust Valves Having Various Throat Designs. TN 1116, Aug. 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.

- Bock, G.: Airscrew Gyroscopic Moments. TM 1099, Sept. 1946.
- Holms, Arthur G. and Faldetta, Richard D.: Effects of Temperature Distribution and Elastic Properties of Materials on Gas-Turbine-Disk Stresses. Rept. 864, 1947.
- Manson, S. S.: The Determination of Elastic Stresses in Gas-Turbine Disks. Rept. 871, 1947.
- Harrison, W. N.; Moore, D. G. and Richmond, J. C.: Review of an Investigation of Ceramic Coatings for Metallic Turbine Parts and Other High-Temperature Applications. TN 1186, March 1947.
- Kemp, R. H.; Morgan, W. C. and Manson, S. S.: The Application of High-Temperature Strain Gages to the Measurement of Vibratory Stresses in Gas-Turbine Buckets. TN 1174, April 1947.
- Cross, Howard C. and Freeman, J. W.: A Metallurgical Investigation of Large Forged Discs of Low Carbon N-155 Alloy. TN 1230, April 1947.
- Manson, S. S. and Morgan, W. C.: Distribution of Bearing Reactions on a Rotating Shaft Supported on Multiple Journal Bearings. TN 1280, May 1947.
- Weigand, A.: Determination of the Stress Concentration Factor of a Stepped Shaft Stressed in Torsion by Means of Precision Strain Gauges. TM 1179, June 1947.
- Pollmann, Erich: Temperatures and Stresses on Hollow Blades for Gas Turbines. TM 1183, June 1947.
- Regier, Arthur A. and Hubbard, Harvey H.: Factors Affecting the Design of Quiet Propellers. RM L7H05, Sept. 1947.
- Good, James N.: Residual Stress Analysis of Overspeeded Disk with Central Hole by X-Ray Diffraction. RM E8E11, July 1948.
- László, F.: Rotating Disks in the Region of Permanent Deformation. TM 1192, Aug. 1948.

METEOROLOGY

(6)

Atmosphere

(6.1)

- Marvin, Charles F.: Preliminary Report on the Problem of the Atmosphere in Relation to Aeronautics. Rept. 4, 1915.
- Blair, William R.: Meteorology and Aeronautics. Rept. 13, 1917.
- Gradenwitz, Arthur: Tests of Artificial Flight at High Altitudes. TM 4, Nov. 1920.
- Prandtl, L.: Some Remarks Concerning Soaring Flight. TM 47, Oct. 1921.
- Terrisse, M. H.: Airways -- Laying Out -Marking - Radio Communications -Meteorological Information - Airdromes - Their Operation. MP 6, March 1922.
- Aujames, P.: Some Principles Governing the Establishment of Meteorological Stations Along Air Routes. TM 71, March 1922.
- Georgii, W.: Static Soaring Flight over Flat Sea Coasts. TM 235, Nov. 1923.
- Havill, Clinton H.: Helium Tables. TN 276, Jan. 1928.
- Brooks, Donald B.: Correcting Engine Tests for Humidity. TN 309, June 1929.
- Brooks, D. B. and Garlock, E. A.: The Effect of Humidity on Engine Power at Altitude. Rept. 426, 1932.
- Georgii, Walter: Future Problems of Soaring Flight; and Eisenlohr, Roland: Systematic Observations of Local Cumuli. TM 709, May 1933.
- Pearson, H. A.: Progress in the Investigation of Condensation Trails Left by Airplanes in Flight. CB, March 1942.
- Flight Research Loads Section: XC-35 Gust Research Project - Operation in Cumulus Congestus Cloud on July 31, 1941 - Maximum Gust Intensities. RB (WR L-555), April 1942.
- Flight Research Loads Section: XC-35 Gust Research Project Bulletin No. 5. Operations Near Cold Front on August 12, 1941. Maximum Gust Intensities. RB, April 1942.

- Tolefson, H. B.: XC-35 Gust Research Project Bulletin No. 9. Flight Measurement of Liquid-Water Content of Clouds and Precipitation Regions. RB L4E17, May 1944.
- Rhode, Richard V. and Pearson, H. A.: Condensation Trails - Where They Occur and What Can Be Done About Them. CB (WR L-474), Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Notes on Prediction and Elimination of Exhaust Type Condensation Trails. CB, Sept. 1942.
- Fuchs, N.: Concerning the Velocity of Evaporation of Small Droplets in a Gas Atmosphere. TM 1160, Aug. 1947.
- Preston, G. Merritt and Blackman, Calvin C.: Effects of Ice Formations on Airplane Performance in Level Cruising Flight. TN 1598, May 1948.
- Boelter, L. M. K.; Poppendiek, H.; Young, G. and Andersen, J. R.: An Investigation of Aircraft Heaters. XXX Nocturnal Irradiation as a Function of Altitude and Its Use in Determination of Heat Requirements of Aircraft. TN 1454, Jan. 1949.
- Wiener, Bernard: Ambient Pressure Determination at High Altitudes by Use of Free-Molecule Theory. TN 1821, March 1949.

STANDARD ATMOSPHERE

(6.1.1)

- Grimault, P.: On the Definition of the Standard Atmosphere. TM 15, April 1921.
- Gregg, Willis Ray: Standard Atmosphere. Rept. 147, 1922.
- Diehl, Walter S.: Notes on the Standard Atmosphere. TN 99, June 1922.
- Diehl, Walter S. and Lesley, E. P.: The Reduction of Airplane Flight Test Data to Standard Atmosphere Conditions. Rept. 216, 1925.
- Diehl, Walter S.: Standard Atmosphere Tables and Data. Rept. 218, 1925.

- Standard Atmosphere (Cont.)
- Diehl, Walter S.: Some Approximate Equations for the Standard Atmosphere. Rept. 376, 1931.
- Brombacher, W. G.: Altitude Pressure Tables for Calibrating Altimeters and Computing Altitudes Based on the United States Standard Atmosphere. Rept. 538, 1935.
- Donely, Philip: Experimental Investigation to Determine the Relative Magnitude of Vertical and Horizontal Gusts in the Atmosphere. MR (WR L-576), July 1940.
- Pearson, H. A.: Progress in the Investigation of Condensation Trails Left by Airplanes in Flight. CB, March 1942.
- Rhode, Richard V.: Observation of Condensation Trails Formed by XC-35 Airplane over Langley Field, Va., July 17, 1941. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Notes on Prediction and Elimination of Exhaust Type Condensation Trails. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Condensation Trails - Where They Occur and What Can Be Done About Them. CB (WR L-474), Sept. 1942.
- Pearson, H. A.: Time-Velocity-Altitude Relations for an Airplane Diving in a Standard Atmosphere. ARR (WR L-291), March 1943.
- Silverstein, Abe: High-Altitude Cooling.
 I Resume of the Cooling Problem.
 ARR L4I11 (WR L-771), Sept. 1944.
- Aiken, William S., Jr.: Standard Nomenclature for Airspeeds with Tables and Charts for Use in Calculation of Airspeed. Rept. 837, 1946.
- Warfield, Calvin N.: Tentative Tables for the Properties of the Upper Atmosphere. TN 1200, Jan. 1947.

ATMOSPHERIC GUSTS

(6.1.2)

- Blair, William R.: Meteorology and Aeronautics. Rept. 13, 1917.
- Warner, Edward P.: Soaring Without Rising Currents. TM 183, Feb. 1923.
- Baldit, M. Albert: Atmospheric Waves and Their Utilization in Soaring Flight. TM 194, March 1923.

- Lange, K. O.: Measurements of Vertical Air Currents in the Atmosphere. TM 648, Nov. 1931.
- Küssner, Hans Georg: Stresses Produced in Airplane Wings by Gusts. TM 654, Jan. 1932.
- Donely, Philip: An Experimental Investigation of the Normal Acceleration of an Airplane Model in a Gust. TN 706, May 1939.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.
- Peiser, A. M. and Walker, W. G.: An Analysis of the Airspeeds and Normal Accelerations of Boeing S-307 Airplanes in Commercial Transport Operation. TN 1141, Sept. 1946.
- Peiser, A. M.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-3 Airplanes in Commercial Transport Operation. TN 1142, Sept. 1946.
- Tolefson, H. B.: An Analysis of the Variation with Altitude of Effective Gust Velocity in Convective-Type Clouds. TN 1628, June 1948.
- Press, Harry: A Statistical Analysis of Gust-Velocity Measurements as Affected by Pilots and Airplanes. TN 1645, June 1948.

STRUCTURE (6.1.2.1)

- Rhode, Richard V. and Lundquist, Eugene E.: Preliminary Study of Applied Load Factors in Bumpy Air. TN 374, April 1931.
- Thompson, F. L.; Peck, W. C. and Beard, A. P.: Air Conditions Close to the Ground and the Effect on Airplane Landings. Rept. 489, 1934.
- Donely, Philip: Effective Gust Structure at Low Altitudes as Determined from the Reactions of an Airplane. Rept. 692, 1940.
- Donely, Philip: Experimental Investigation to Determine the Relative Magnitude of Vertical and Horizontal Gusts in the Atmosphere. MR (WR L-576), July 1940.
- Rhode, Richard V. and Pearson, Henry A.. A Semi-Rational Criterion for Unsymmetrical Gust Loads. ARR (WR L-418), Aug. 1941.
- Pierce, Harold B.: Dynamic Stress Calculations for Two Airplanes in Various Gusts. ARR (WR L-484), Sept. 1941.

- Structure Atmospheric Gusts (Cont.)
- Flight Research Loads Section: XC-35 Gust Research Project Bulletin No. 1. Operations in Vicinity of Cold Front, May 23, 1941. Evaluation of Maximum Gust Intensities. ARR, Sept. 1941.
- Flight Research Loads Section: XC-35 Gust Research Project Bulletin No. 2. Operations in Vicinity of Cold Front, May 23, 1941. Reactions of Pilot's Instruments. ARR, Oct. 1941.
- Moskovitz, A. I.: XC-35 Gust Research Project - Preliminary Analysis of the Lateral Distribution of Gust Velocity Along the Span of an Airplane. RB (WR L-551), March 1943.
- Rhode, Richard V. and Donely, Philip: Frequency of Occurrence of Atmospheric Gusts and of Related Loads on Airplane Structures. ARR L4I21 (WR L-121), Nov. 1944.
- Moskovitz, A. I.: XC-35 Gust Research Project Characteristics of Vertical Drafts and Associated Vertical-Gust Velocities Within Convective-Type Clouds. RB L5A03 (WR L-554), Jan. 1945.
- Moskovitz, A. I. and Peiser, A. M.: Statistical Analysis of the Characteristics of Repeated Gusts in Turbulent Air. ARR L5H30 (WR L-39), Nov. 1945.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms. I -June 29, 1946 to July 8, 1946 at Orlando, Florida. MR L6I13a, Aug. 1946.
- Helfand, B. B.: Meteorological Conditions Associated with Flight Measurements of Atmospheric Turbulence. TN 1273, June 1947.
- Gringorten, I. I. and Press, H.: A Meteorological Measure of Maximum Gust Velocities in Clouds. TN 1569, April 1948.
- Press, H. and Thompson, J. K.: An Analysis of the Relation Between Horizontal Temperature Variations and Maximum Effective Gust Velocities in Thunderstorms. TN 1917, July 1949.

FREQUENCY (6.1.2.2)

- Gregg, W. R.: Meteorological Conditions Along Airways. Rept. 245, 1926.
- Thompson, F. L.; Peck, W. C. and Beard, A. P.: Air Conditions Close to the Ground and the Effect on Airplane Landings. Rept. 489, 1934.

- Walker, Walter G.: Summary of V-G Records Taken on Transport Airplanes from 1932 to 1942. RB (WR L-453), July 1942.
- Rhode, Richard V. and Donely, Philip: Frequency of Occurrence of Atmospheric Gusts and of Related Loads on Airplane Structures. ARR L4I21 (WR L-121), Nov. 1944.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.
- Reisert, Thomas D.: Frequency of Occurrence of Critical Gust Loads on Overloaded Airplanes. ARR L5B14 (WR L-73), March 1945.
- Bland, Reginald B. and Reisert, T. D.: An Application of Statistical Data in the Development of Gust-Load Criterions. TN 1268, April 1947.
- Helfand, B. B.: Meteorological Conditions Associated with Flight Measurements of Atmospheric Turbulence. TN 1273, June 1947.
- Press, H. and Binckley, E. T.: A Preliminary Evaluation of the Use of Ground Radar for the Avoidance of Turbulent Clouds. TN 1684, Sept. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Martin M-130 Airplanes in Commercial Transport Operation. TN 1693, Sept. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Sikorsky S-42A Airplanes in Commercial Transport Operation. TN 1733, Oct. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-2 Airplanes in Commercial Transport Operation. TN 1754, Nov. 1948.
- Walker, Walter G. and Hadlock, Ivan K.:
 An Analysis of the Airspeeds and Normal Accelerations of Boeing B-247
 and B-247D Airplanes in Commercial Transport Operation. TN 1783, Dec. 1948.

TURBULENCE (6.1.2.3)

- Gregg, W. R.: Meteorological Conditions Along Airways. Rept. 245, 1926.
- Blenk, Hermann; Hertel, Heinrich and Thalau, Karl: The German Investigation of the Accident at Meopham (England). TM 669, April 1932.

- Turbulence Atmospheric Gusts (Cont.)
- Flight Research Loads Section: XC-35
 Gust Research Project Bulletin No. 3.
 Operations in Cumulo-Nimbus and
 Cumulus Congestus Clouds on July 3,
 1941. Maximum Gust Intensities. RB,
 March 1942.
- Flight Research Loads Section: XC-35 Gust Research Project - Operation in Cumulus Congestus Cloud on July 31, 1941 - Maximum Gust Intensities. RB (WR L-555), April 1942.
- Flight Research Loads Section: XC-35 Gust Research Project Bulletin No. 5. Operations Near Cold Front on August 12, 1941. Maximum Gust Intensities. RB, April 1942.
- Flight Research Loads Section: XC-35 Gust Research Project - Bulletin No. 6. Preliminary Analysis of Gust Measurements. RB, April 1942.
- Walker, Walter G.: Summary of V-G Records Taken on Transport Airplanes from 1932 to 1942. RB (WR L-453), July 1942.
- Moskovitz, A. I.: XC-35 Gust Research Project - Preliminary Analysis of the Lateral Distribution of Gust Velocity Along the Span of an Airplane. RB (WR L-551), March 1943.
- Moskovitz, A. I.: XC-35 Gust Research Project Bulletin No. 8. Analysis of Gust Measurements. RB L4D22 (WR L-552), April 1944.
- Walker, Walter G.: Notes on Unusual V-G Records from Transport Airplanes. RB L4H17 (WR L-36), Aug. 1944.
- Rhode, Richard V. and Donely, Philip: Frequency of Occurrence of Atmospheric Gusts and of Related Loads on Airplane Structures. ARR L4I21 (WR L-121), Nov. 1944.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.
- Peiser, A. M. and Wilkerson, M.: A Method of Analysis of V-G Records from Transport Operations. Rept. 807, 1945.
- Moskovitz, A. I.: XC-35 Gust Research Project Characteristics of Vertical Drafts and Associated Vertical-Gust Velocities Within Convective-Type Clouds. RB L5A03 (WR L-554), Jan. 1945.

- Reisert, Thomas D.: Frequency of Occurrence of Critical Gust Loads on Overloaded Airplanes. ARR L5B14 (WR L-73), March 1945.
- Moskovitz, A. I. and Peiser, A. M.: Statistical Analysis of the Characteristics of Repeated Gusts in Turbulent Air. ARR L5H30 (WR L-39), Nov. 1945.
- Warfield, Calvin N. and Kenimer, Robert
 L.: An Infrared Cloud Indicator.
 I Analysis of Infrared-Radiation Exchange with Tables and Chart for Calibration of the Cloud Indicator. ACR L5104 (WR L-18), Nov. 1945.
- Harrison, L. P.: Lightning Discharges to Aircraft and Associated Meteorological Conditions. TN 1001, May 1946.
- Tolefson, H. B. and Pratt, K. G.: An Analysis of the Indications of the University of Chicago Airborne Turbulence Indicator in Gusty Air. MR L6G08 (WR L-723), Aug. 1946.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms. II - July 9, 1946 to July 11, 1946 at Orlando, Florida. RM L6116a, Sept. 1946.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms. III July 12, 1946 to July 18, 1946 at Orlando, Florida. RM L6I24, Oct. 1946.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms. IV July 19, 1946 to July 20, 1946 at Orlando, Florida. RM L6J16b, Oct. 1946.
- Tolefson, Harold B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms August 7, 1946 to August 13, 1946 at Orlando, Florida. RM L6K16, Dec. 1946.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms August 21, 1946 to August 22, 1946. RM L6L02a, Dec. 1946.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms August 23, 1946 to September 4, 1946 at Orlando, Florida. RM L7A14, Jan. 1947.

- Turbulence Atmospheric Gusts (Cont.)
- Tolefson, Harold B.: Preliminary Analysis of NACA Measurements of Atmospheric Turbulence Within a Thunderstorm U.S. Weather Bureau Thunderstorm Project. TN 1233, March 1947.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms September 5, 1946 to September 10, 1946 at Orlando, Florida. RM L7C07, March 1947.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms July 22, 1946 to July 23, 1946 at Orlando, Florida. RM L7C19, March 1947.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms September 11, 1946 to September 16, 1946 at Orlando, Florida. RM L7C20, March 1947.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms September 17, 1946 to September 18, 1946 at Orlando, Florida. RM L7C21, March 1947.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms July 24, 1946 to August 6, 1946 at Orlando, Florida. RM L7C28, March 1947.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms August 14, 1946 to August 15, 1946 at Orlando, Florida. RM L7C31, March 1947.
- Tolefson, H. B.: Evaluation of Gust and Draft Velocities from Flights of P-61c Airplanes Within Thunderstorms August 17, 1946 to August 19, 1946 at Orlando, Florida. RM L7D01, March 1947.
- Helfand, B. B.: Meteorological Conditions Associated with Flight Measurements of Atmospheric Turbulence. TN 1273, June 1947.
- Press, Harry: The Effect of Sample Size on the Determination of Maximum Gust Velocities in Clouds. RM L7H27, Oct. 1947.
- Gringorten, I. I. and Press, H.: A Meteorological Measure of Maximum Gust Velocities in Clouds. TN 1569, April 1948.

- Press, H. and Binckley, E. T.: A Preliminary Evaluation of the Use of Ground Radar for the Avoidance of Turbulent Clouds. TN 1684, Sept. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Martin M-130 Airplanes in Commercial Transport Operation. TN 1693, Sept. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Sikorsky S-42A Airplanes in Commercial Transport Operation. TN 1733, Oct. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-2 Airplanes in Commercial Transport Operation. TN 1754, Nov. 1948.
- Steiner, Roy: An Evaluation of Air-Borne Radar as a Means of Avoiding Atmospheric Turbulence. RM L8I01, Nov. 1948.
- Walker, Walter G. and Hadlock, Ivan K.:
 An Analysis of the Airspeeds and Normal Accelerations of Boeing B-247 and B-247D Airplanes in Commercial Transport Operation. TN 1783, Dec. 1948.
- Press, H. and Thompson, J. K.: An Analysis of the Relation Between Horizontal Temperature Variations and Maximum Effective Gust Velocities in Thunderstorms. TN 1917, July 1949.

ALLEVIATION (6.1.2.4)

- Donely, Philip and Shufflebarger, C. C.: Tests of a Gust-Alleviating Flap in the Gust Tunnel. TN 745, Jan. 1940.
- Shufflebarger, C.C.: Tests of a Gust-Alleviating Wing in the Gust Tunnel. TN 802, April 1941.
- Bland, Reginald B. and Reisert, T. D.: An Application of Statistical Data in the Development of Gust-Load Criterions. TN 1268, April 1947.
- Pierce, Harold B.: Tests of a 45° Sweptback-Wing Model in the Langley Gust Tunnel. TN 1528, Feb. 1948.
- Pierce, Harold B.: Gust-Tunnel Investigation of a 45 Sweptforward-Wing Model. TN 1717, Oct. 1948.
- Mickleboro, Harry C.: Evaluation of a Fixed Spoiler as a Gust Alleviator. TN 1753, Nov. 1948.

- Alleviation Atmospheric Gusts (Cont.)
- Reisert, Thomas D.: Gust-Tunnel Investigation of a Wing Model with Semichord Line Swept Back 30°. TN 1794, Jan. 1949.

ELECTRICITY

(6.1.3)

- From the German Translation of the Original Spanish by Emilio Herrera, "Luftfahrt," April 15, 1924: Balloon Flight and Atmospheric Electricity. TM 271, July 1924.
- Koppe, Heinrich: Practical Experiences with Lightning Discharges to Airplanes. TM 730, Dec. 1933.
- Special Committee on Hazards to Aircraft NACA: Hazards to Aircraft Due to E-lectrical Phenomena. TN 494, March 1934.
- Harrison, L. P.: Preliminary Report on Atmospheric Electrical Discharges to Aircraft. ARR, Aug. 1941.
- Workman, E. J. and Holzer, R. E.: A Preliminary Investigation of the Electrical Structure of Thunderstorms. TN 850, July 1942.

- Workman, E. J.; Holzer, R. E. and Pelsor, G. T.: The Electrical Structure of Thunderstorms. TN 864, Nov. 1942.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. I - General Analysis. ARR 3I10 (WR W-59), Sept. 1943.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. II - Lightning Conductor Materials. ARR 3J12 (WR W-60), Oct. 1943.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. III - Electrical Effects in Glider Towlines. ARR 4C20 (WR W-62), March 1944.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. IV - Electrocution Hazards from Inductive Voltages. ARR 4128 (WR W-85), March 1945.
- Harrison, L. P.: Lightning Discharges to Aircraft and Associated Meteorological Conditions. TN 1001, May 1946.

Ice Formation

(6.2)

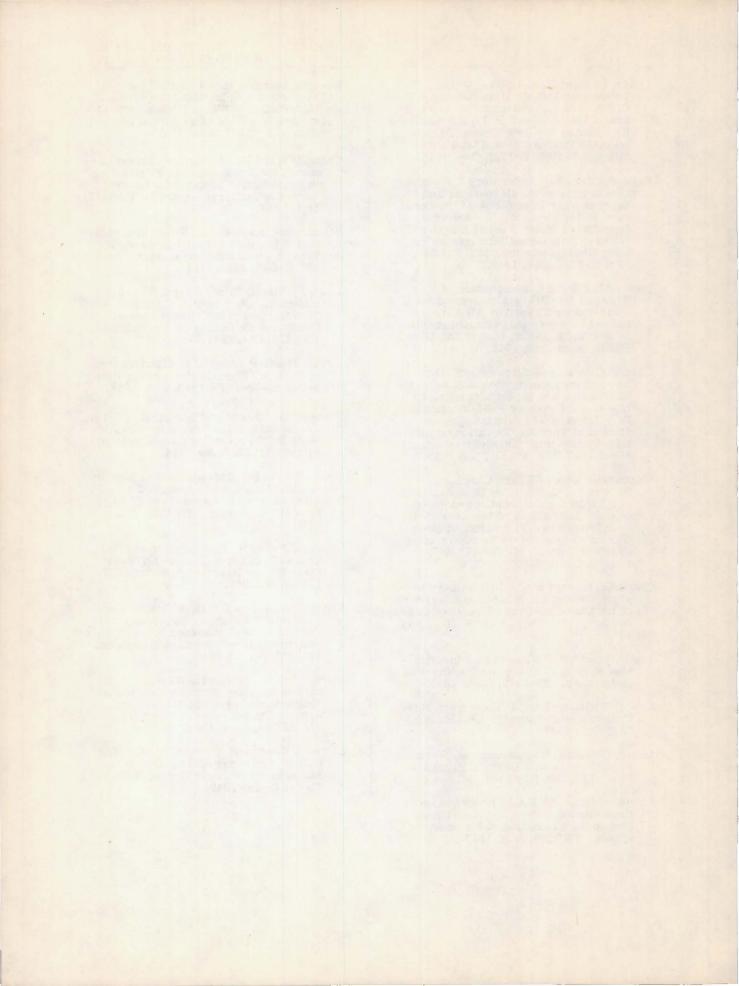
- Sparrow, Stanwood W.: "Airplane Crashes: Engine Troubles." A Possible Explanation. TN 55, March 1921.
- Gregg, W. R.: Meteorological Conditions Along Airways. Rept. 245, 1926.
- Carroll, Thomas and McAvoy, Wm. H.: The Formation of Ice upon Exposed Parts of an Airplane in Flight. TN 293, July 1928.
- Kopp, W.: Danger of Ice Formation on Airplanes. TM 499, Feb. 1929.
- Carroll, Thomas and McAvoy, William H.: The Formation of Ice upon Airplanes in Flight. TN 313, Aug. 1929.
- Knight, Montgomery and Clay, William C.: Refrigerated Wind Tunnel Tests on Surface Coatings for Preventing Ice Formation. TN 339, May 1930.
- Samuels, L. T.: Meteorological Conditions During the Formation of Ice on Aircraft. TN 439, Dec. 1932.
- Noth, H. and Polte, W.: The Formation of Ice on Airplanes. TM 786, Feb. 1936.
- Clay, William C.: The Prevention of Ice Formation on Propellers. ACR, Oct. 1937.
- Findeisen, W.: Meteorological-Physical Limitations of Icing in the Atmosphere. TM 885, Jan. 1939.
- Ritz, L.: Ice Formation on Wings. TM 888, Feb. 1939.
- The French Committee for the Study of Ice Formation, May 19, 1938: Report on Ice Formation on Aircraft. TM 919, Dec. 1939.
- Rodert, Lewis A.: The Effects of Aerodynamic Heating on Ice Formations on Airplane Propellers. TN 799, March 1941.
- Pearson, H. A.: Progress in the Investigation of Condensation Trails Left by Airplanes in Flight. CB, March 1942.
- Bleeker, W.: The Formation of Ice on Aircraft. TM 1027, Aug. 1942.
- Robitzsch, M.: The Icing of Aircraft. TM 1028, Sept. 1942.

- Rhode, Richard V.: Observation of Condensation Trails Formed by XC-35 Airplane over Langley Field, Va., July 17, 1941. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Notes on Prediction and Elimination of Exhaust Type Condensation Trails. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Condensation Trails - Where They Occur and What Can Be Done About Them. CB (WR L-474), Sept. 1942.
- Kimball, Leo B.: Icing Tests of Aircraft-Engine Induction Systems. ARR (WR W-97), Jan. 1943.
- Look, Bonne C.: Flight Tests of the Thermal Ice Prevention Equipment on the B-17F Airplane. ARR 4B02 (WR A-23), Feb. 1944.
- Hardy, J. K.: Measurement of Free Water in Cloud Under Conditions of Icing. ARR 4111 (WR A-15), Oct. 1944.
- Essex, Henry A. and Galvin, Herman B.:
 A Laboratory Investigation of Icing
 and Heated-Air De-Icing of a ChandlerEvans 1900 CPB-3 Carburetor Mounted
 on a Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J03 (WR E-15), Oct. 1944.
- Galvin, Herman B. and Essex, Henry A.:
 Fluid De-Icing Tests on a ChandlerEvans 1900 CPB-3 Carburetor Mounted
 on a Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J06 (WR E-12), Oct. 1944.
- Galvin, Herman B. and Essex, Henry A.:
 A Laboratory Investigation of the Icing
 Characteristics of the Bendix-Stromberg Carburetor Model PD-12F5 with
 the Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J18 (WR E-18), Oct. 1944.
- Hillendahl, Wesley H.: A Flight Investigation of the Ice-Prevention Requirements of the United States Naval K-Type Airship. MR A5J19a (WR A-4), Oct. 1945.
- Essex, Henry A.; Keith, Wayne C. and Mulholland, Donald E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. II Determination of Limiting-Icing Conditions. MR E5L18a (WR E-171), Dec. 1945.

519

- Lyons, Richard E. and Coles, Willard D.:
 Laboratory Investigation of Icing in the
 Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane.
 III Heated Air as a Means of Deicing the Carburetor and Inlet Elbow.
 MR E5L19 (WR E-172), Dec. 1945.
- Renner, Clark E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. V Effect of Injection of Water-Fuel Mixtures and Water-Ethanol-Fuel Mixtures on the Icing Characteristics. MR E5L28 (WR E-174), Dec. 1945.
- Jones, Alun R.: An Investigation of a Thermal Ice-Prevention System for a Twin-Engine Transport Airplane (Based on Previously Issued Reports ARR's 5A03, 5A03a, b, c, 5C20, 5D06, 5G20). Rept. 862, 1946.
- Chapman, G. E. and Zlotowski, E. D.:
 Laboratory Investigation of Icing in the
 Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane.
 IV Effect of Throttle Designs and
 Method of Throttle Operation on Induction-System Icing Characteristics.
 MR E5L27 (WR E-173), Jan. 1946.
- Mulholland, Donald R. and Chapman,
 Gilbert E.: Laboratory Investigations
 of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed
 P-38J Airplane. VI Effect of Modifications to Fuel-Spray Nozzle on Icing
 Characteristics. MR E6A23 (WR
 E-175), Jan. 1946.
- Chapman, Gilbert E.: A Preliminary Investigation of the Icing Characteristics of the Chandler-Evans 58 CPB-4 Carburetor. MR E6G11 (WR E-284), July 1946.
- Lewis, James P.: Wind-Tunnel Investigation of Icing of an Engine Cooling-Fan Installation. TN 1246, April 1947.
- Lewis, William: Icing Properties of Non-Cyclonic Winter Stratus Clouds. TN 1391, July 1947.
- Lewis, William: Icing Zones in a Warm Front System with General Precipitation. TN 1392, July 1947.
- Lewis, William: A Flight Investigation of the Meteorological Conditions Conducive to the Formation of Ice on Airplanes. TN 1393, Aug. 1947.

- Bergrun, Norman R.: A Method for Numerically Calculating the Area and Distribution of Water Impingement on the Leading Edge of an Airfoil in a Cloud. TN 1397, Aug. 1947.
- Coles, Willard D.: Laboratory Investigation of Ice Formation and Eliminating in the Induction System of a Large Twin-Engine Cargo Aircraft. TN 1427, Sept. 1947.
- Kleinknecht, Kenneth S.: Flight Investigation of the Heat Requirements for Ice Prevention on Aircraft Windshields. RM E7G28, Sept. 1947.
- Lewis, William; Kline, Dwight B. and Steinmetz, Charles P.: A Further Investigation of the Meteorological Conditions Conducive to Aircraft Icing. TN 1424, Oct. 1947.
- Lewis, James P.: De-Icing Effectiveness of External Electric Heaters for Propeller Blades. TN 1520, Feb. 1948.
- Preston, G. Merritt and Blackman, Calvin C.: Effects of Ice Formations on Airplane Performance in Level Cruising Flight. TN 1598, May 1948.
- Kline, Dwight B.: Investigation of Meteorological Conditions Associated with Aircraft Icing in Layer-Type Clouds for 1947-48 Winter. TN 1793, Jan. 1949.
- Coles, Willard D.: Investigation of Icing Characteristics of Typical Light-Airplane Engine Induction Systems. TN 1790, Feb. 1949.
- Jones, Alun R. and Lewis, William: Reccommended Values of Meteorological Factors to be Considered in the Design of Aircraft Ice-Prevention Equipment. TN 1855, March 1949.
- Jones, Alun R. and Lewis, William: A Review of Instruments Developed for the Measurement of the Meteorological Factors Conducive to Aircraft Icing. RM A9C09, April 1949.
- Lewis, William and Hoecker, Walter H., Jr.: Observations of Icing Conditions Encountered in Flight During 1948. TN 1904, June 1949.



OPERATING PROBLEMS
(7)

Safety

(7.1)

- Warner, E. P.: The Problem of the Helicopter. TN 4, May 1920.
- Gradenwitz, Arthur: Tests of Artificial Flight at High Altitudes. TM 4, Nov. 1920.
- Sparrow, Stanwood W.: "Airplane Crashes: Engine Troubles." A Possible Explanation. TN 55, March 1921.
- Report of the Aero-Technical Conference of the Scientific Association for Aeronautics, March 5, 1919: The Technical Development of the Transport Airplane. TM 19, April 1921.
- Rohrbach, A. K.: Extracts from the German Technical Press. Transport Airplanes. TM 22, April 1921.
- Anon.: Competition for Safety Fuel Tanks. TM 39, Sept. 1921.
- Carroll, T.: A Study of Taking Off and Landing an Airplane. Rept. 154, 1922.
- Franck, Captain: Communications and Beacons on Air Routes. TM 69, March 1922.
- Aujames, P.: Some Principles Governing the Establishment of Meteorological Stations Along Air Routes. TM 71, March 1922.
- Easter, Ewing: Notes on Landing Places for Seaplanes Along the Atlantic Coast. TM 72, March 1922.
- Terrisse, M. H.: Airways. Laying Out -Marking - Radio Communications -Meteorological Information - Airdromes - Their Operation. MP 6, March 1922.
- Warner, Edward P.: Night Flying. TM 97, May 1922.
- Anon.: Beacon Lights for Air Traffic. TM 119, July 1922.
- Rohrbach, Dr. Adolf: Structural Safety During Curved Flight. TN 107, Aug. 1922.
- Stadthagen, Paul: Illumination of Airways and Landing Fields. TM 124, Aug. 1922.
- Warner, Edward P.: Potentialities of the Parachute. TM 127, Aug. 1922.

- Warner, Edward P.: Safety in Flight. TM 133, Aug. 1922.
- From "Illustrierte Flug-Woche," January 4, 1922: Suggestions for Commercial Airplane Construction. MP 8, Aug. 1922.
- Warner, Edward P.: The Prevention of Fire in the Air. TM 144, Sept. 1922.
- Warner, Edward P.: The Usefulness of Stunting. TM 162, Nov. 1922.
- Warner, Edward P.: Seaplanes for Commerce. TM 193, March 1923.
- Bleriot, Louis: Safety Factors in Aviation. TM 197, April 1923.
- Le Bailly: Factors of Safety and Indexes of Static Tests. TM 206, May 1923.
- From Bulletin de la Navigation Aérienne, March 1923: Regulations Governing the Issuance of Certificates of Airworthiness of Aircraft in France. TN 155, Aug. 1923.
- Phillippe, J.: Nieuport-Astra Parachute Contest. TM 233, Oct. 1923.
- Warner, Edward P.: Factors of Safety. TM 242, Dec. 1923.
- Devaluez, F.: Investigations of Aviation Accidents and Lessons to be Drawn from Them. TM 245, Jan. 1924.
- Courtney, F. T.: The Practical Difficulties of Commercial Flying. TM 254, March 1924.
- Experiments with a Device for Shortening the Glide and Landing Run of an Airplane. TM 272, July 1924.
- Provisional Rules for the Inspection of Aircraft Adopted by the French Bureau Veritas. TM 279, Sept. 1924.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Poeschel, Prof.: Suggestions for Courses of Instruction in Aviation. TM 304, March 1925.
- Mazer, Paul: Airplane Parachutes. TM 322, Aug. 1925.

- Gregg, W. R.: Meteorological Conditions Along Airways. Rept. 245, 1926.
- Eliott-Lynn: Suggestions for Popularizing Civil Aviation. MP 14, Jan. 1926.
- Pröll, A.: Take-Off Distance for Airplanes. TM 381, 1926.
- Mazer, Paul: Devices for Prevention of Stalled Flight. TM 389, Nov. 1926.
- Supplement to "Bulletin de la Chambre Syndicale des Industries Aéronautiques." Permanent Commission of Aeronautical Studies. Report No. 4. TM 402, March 1927.
- Reid, Elliot G. and Carroll, Thomas: A Warning Concerning the Take-Off with Heavy Load. TN 258, July 1927.
- Miller, Roy G.: A Load Factor Formula. TN 263, Aug. 1927.
- Brunat, H.: Safety in Airplane Flight. TM 438, Nov. 1927.
- Special Committee on the Nomenclature, Subdivision, and Classification of Aircraft Accidents: Aircraft Accidents -Method of Analysis. Rept. 308, 1928.
- Müller, Waldemar: Parachutes for Aircraft. TM 450, Feb. 1928.
- Sabatier, J.: Discussion of Problems Relating to the Safety of Aviation. Part I. TM 464, May 1928.
- Sabatier, J.: Discussion of Problems Relating to the Safety of Aviation. Part II. TM 465, May 1928.
- Carroll, Thomas: A Dangerous Seaplane Landing Condition. TN 287, May 1928.
- Richardson, H. C.: The Reaction on a Float Bottom when Making Contact with Water at High Speeds. TN 288, May 1928.
- Knight, Montgomery and Bamber, Millard J.: Preliminary Report on the Flat-Top Lift Curve as a Factor in Control at Low Speed. TN 297, Sept. 1928.
- Breguet, Louis: Landing and Braking of Airplanes. TM 507, April 1929.
- Sabatier, J.: Fire Prevention on Airplanes - Part I. TM 536, Oct. 1929.
- Sabatier, J.: Fire Prevention on Airplanes - Part II. TM 537, Oct. 1929.
- Committee on Aircraft Accidents: Aircraft Accidents - Method of Analysis. Rept. 357, 1930.

- Brunat, Henri: Combating Airplane Fires. TM 550, Jan. 1930.
- Geer, William C. and Scott, Merit: The Prevention of Ice Hazard on Airplanes. TN 345, July 1930.
- Schreiber, Ernest: The Behm Acoustic Sounder for Airplanes with Reference to Its Accuracy. TM 588, Oct. 1930.
- Theodorsen, Theodore and Freeman, Ira M.: The Elimination of Fire Hazard Due to Back Fires. Rept. 409, 1931.
- Weick, Fred E .: The Behavior of Conventional Airplanes in Situations Thought To Lead to Most Crashes. TN 363, Feb. 1931.
- Kuhn, Fritz: Fire Prevention on Aircraft. TM 628, July 1931.
- Anon.: Description of Westland Hill Pterodactyl Mark IV. MP 27, Aug. 1931.
- Michael, Franz: Experiments with Airplane Brakes. TM 636, Sept. 1931.
- Leglise, Pierre: The New "Charlestop" Remote Brake Transmission and Control. TM 640, Oct. 1931.
- Kurz, Gerhard: Measurement of Visibility from the Pilot's Cockpit on Different Airplane Types. TM 646, Nov. 1931.
- Weitzmann, Ludwig: German Aircraft Accident Statistics, 1930. TM 664, March 1932.
- Blenk, Hermann; Hertel, Heinrich and Thalau, Karl: The German Investigation of the Accident at Meopham (England). TM 669, April 1932.
- Kahn, Louis: The Aerodynamic Safety of Airplanes. TM 684, Sept. 1932.
- Gloeckner, M. Heinrich: Methods for Facilitating the Blind Landing of Airplanes. TM 687, Oct. 1932.
- Michael, Franz: The Problem of Tire Sizes for Airplane Wheels. TM 689, Oct. 1932.
- Samuels, L. T.: Meteorological Conditions During the Formation of Ice on Aircraft. TN 439, Dec. 1932.
- Küssner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. TM 716, July 1933.
- Küssner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. II - Loading Conditions in Germany, England, and the United States. TM 717, July 1933.

- Küssner, H. G. and Thalau, Karl: Development of the Rules Governing the Strength of Airplanes. III Loading Conditions in France, Italy, Holland, and Russia Aims at Standardization. TM 718, Aug. 1933.
- Special Committee on Hazards to Aircraft NACA: Hazards to Aircraft Due to Electrical Phenomena. TN 494, March 1934.
- Brombacher, W. G.: Measurement of Altitude in Blind Flying. TN 503, Aug. 1934.
- Bernson, Reysa: Ascension and Catastrophe of the Russian Stratosphere Balloon "Ossoaviakhim-1." MP 39, Aug. 1934.
- Teichmann, Alfred: Safety and Design in Airplane Construction. TM 755, Oct. 1934.
- Gough, Melvin N.: The Measurement of the Field of View from Airplane Cockpits. Rept. 514, 1935.
- Compiled by Bureau Veritas: Accident Statistics for French Commercial Airplanes for the Years 1924 to 1933. MP 40, Jan. 1935.
- Committee on Aircraft Accidents: Aircraft Accidents Method of Analysis. Rept. 576, 1936.
- Gough, Melvin N.: Notes on the Technique of Landing Airplanes Equipped with Wing Flaps. TN 553, Jan. 1936.
- Jones, Robert T.: Accelerations in Landing with a Tricycle-Type Landing Gear. ACR, Feb. 1937.
- Wenzinger, Carl J. and Kantrowitz, A. R.: Notes on Factors Affecting Geometrical Arrangement of Tricycle-Type Landing Gears. ACR, April 1937.
- Hartman, Edwin P.: Wind-Tunnel Tests of a 2-Engine Airplane Model as a Preliminary Study of Flight Conditions Arising on the Failure of One Engine. TN 646, April 1938.
- Kantrowitz, Arthur: Stability of Castering Wheels for Aircraft Landing Gears. Rept. 686, 1940.
- Howard, Walter B.: A Full-Scale Investigation of the Effect of Several Factors on the Shimmy of Castering Wheels. TN 760, April 1940.
- Beseler, Joachim: Armament of Enemy Aircraft. MP 45, June 1940.

- Rhode, Richard V.: Some Effects of Rainfall on Flight of Airplanes and on Instrument Indications. TN 803, April 1941.
- Weidemann, Hans: Inertia of Dynamic Pressure Arrays. TM 998, Dec. 1941.
- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report, Feb. 1942.
- Pearson, H. A.: Progress in the Investigation of Condensation Trails Left by Airplanes in Flight. CB, March 1942.
- Jones, Alun R. and Zalovcik, John A.: Flight Investigation of a Stall-Warning Indicator for Operation Under Icing Conditions. RB (WR L-503), July 1942.
- Workman, E. J. and Holzer, R. E.: A Preliminary Investigation of the Electrical Structure of Thunderstorms. TN 850, July 1942.
- Rhode, Richard V. and Pearson, H. A.: Notes on Prediction and Elimination of Exhaust Type Condensation Trails. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Condensation Trails - Where They Occur and What Can Be Done About Them. CB (WR L-474), Sept. 1942.
- Gilruth, R. R.; Zalovcik, J. A. and Jones, A. R.: Flight Investigation of an NACA Ice-Detector Suitable for Use as a Rate-of-Icing Indicator. ARR (WR L-364), Nov. 1942.
- Bemis, John R. and Houghton, Henry G., Jr.: An Instrument for the Determination of Rain Densities in Flight. ARR 3E18 (WR W-42), May 1943.
- Benson, James M.: Piloting of Flying Boats with Special Reference to Porpoising and Skipping. TN 923, Feb. 1944.
- Biot, M. A. and Bisplinghoff, R. L.: Dynamic Loads on Airplane Structures During Landing. ARR 4H10 (WR W-92), Oct. 1944.
- Rhode, Richard V. and Donely, Philip: Frequency of Occurrence of Atmospheric Gusts and of Related Loads on Airplane Structures. ARR L4121 (WR L-121), Nov. 1944.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.

- Gustafson, F. B. and O'Sullivan, William J., Jr.: The Effect of High Wing Loading on Landing Technique and Distance, with Experimental Data for the B-26 Airplane. ARR L4K07 (WR L-160), Jan. 1945.
- Moskovitz, A. I.: XC-35 Gust Research Project Characteristics of Vertical Drafts and Associated Vertical-Gust Velocities Within Convective-Type Clouds. RB L5A03 (WR L-554), Jan. 1945.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. IV - Electrocution Hazards from Inductive Voltages. ARR 4I28 (WR W-85), March 1945.
- Reisert, Thomas D.: Frequency of Occurrence of Critical Gust Loads on Overloaded Airplanes. ARR L5B14 (WR L-73), March 1945.
- Peiser, A. M. and Walker, W. G.: An Analysis of the Airspeeds and Normal Accelerations of Boeing S-307 Airplanes in Commercial Transport Operation. TN 1141, Sept. 1946.
- Peiser, A. M.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-3 Airplanes in Commercial Transport Operation. TN 1142, Sept. 1946.
- Danforth, Edward C. B., III and Reeder, John P.: Flight Measurements of Internal Cockpit Pressures in Several Fighter-Type Airplanes. TN 1173, Feb. 1947.
- Hunter, P. A. and Vensel, J. R.: A Flight Investigation to Increase the Safety of a Light Airplane. TN 1203, March 1947.
- Tolefson, Harold B.: Preliminary Analysis of NACA Measurements of Atmospheric Turbulence Within a Thunderstorm U. S. Weather Bureau Thunderstorm Project. TN 1233, March 1947.
- Cocke, Bennie W., Jr. and Czarnecki, K. R.: Canopy Loads Investigation for the F6F-3 Airplane. RM L6L23a, April 1947.
- Helfand, B. B.: Meteorological Conditions Associated with Flight Measurements of Atmospheric Turbulence. TN 1273, June 1947.
- Webster, A. P.: Free-Falls and Parachute Descents in the Standard Atmosphere. TN 1315, June 1947.

- Talmage, Donald B.: A Time History of Control Operation of a C-54 Airplane in Blind Landing Approaches. RM L7F20, July 1947.
- Selna, James and Zerbe, John: A Method for Calculating the Heat Required for the Prevention of Fog Formations on the Inside Surfaces of Single Panel Bullet-Resisting Windshields During Diving Flight. TN 1301, July 1947.
- Michel, Donald J.; Hickel, Robert O. and Voit, Charles H.: Performance of a Double-Row Radial Aircraft Engine with Three Methods of Safety-Fuel Injection. TN 1413, Aug. 1947.
- Cleveland Laboratory Aircraft Fire Research Panel: Preliminary Survey of the Aircraft Fire Problem. RM E8B18, May 1948.
- Neihouse, Anshal I.: The Effect of Variations in Moments of Inertia on Spin and Recovery Characteristics of a Single-Engine Low-Wing Monoplane with Various Tail Arrangements, Including a Twin Tail. TN 1575, May 1948.
- Gale, Lawrence J.: Effect of Landing Flaps and Landing Gear on the Spin and Recovery Characteristics of Airplanes. TN 1643, June 1948.
- Press, H. and Binckley, E. T.: A Preliminary Evaluation of the Use of Ground Radar for the Avoidance of Turbulent Clouds. TN 1684, Sept. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Martin M-130 Airplanes in Commercial Transport Operation. TN 1693, Sept. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Sikorsky S-42A Airplanes in Commercial Transport Operation. TN 1733, Oct. 1948.
- Walker, Walter G.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-2 Airplanes in Commercial Transport Operation. TN 1754, Nov. 1948.
- Klinar, Walter J. and Snyder, Thomas L.: Influence of Tail Length upon the Spin-Recovery Characteristics of a Trainer-Type-Airplane Model. TN 1764, Dec. 1948.
- Gale, Lawrence J. and Jones, Ira P., Jr.: Effects of Antispin Fillets and Dorsal Fins on the Spin and Recovery Characteristics of Airplanes as Determined from Free-Spinning-Tunnel Tests. TN 1779, Dec. 1948.

- Walker, Walter G. and Hadlock, Ivan K.:
 An Analysis of the Airspeeds and Normal Accelerations of Boeing B-247
 and B-247D Airplanes in Commercial
 Transport Operation. TN 1783, Dec.
 1948.
- Klinar, Walter J. and Gale, Lawrence J.:
 Wind-Tunnel Investigation of the Spinning Characteristics of a Model of a
 Twin-Tail Low-Wing Personal-OwnerType Airplane with Linked and Unlinked
 Rudder and Aileron Controls. TN 1801,
 Jan. 1949.
- Scher, Stanley H. and Gale, Lawrence J.: Wind-Tunnel Investigation of the Opening Characteristics, Drag, and Stability of Several Hemispherical Parachutes. TN 1869, April 1949.

- Neihouse, Anshal I.: Spin-Tunnel Investigation to Determine the Effectiveness of a Rocket for Spin Recovery. TN 1866, April 1949.
- Höhler, P.: The Influence of the Application of Power During Spin Recovery of Multiengine Airplanes. TM 1219, June 1949.
- Höhler, P. and von Köppen, I.: Experimental Flights for Testing of a Reactor as an Expedient for the Termination of Dangerous Spins. TM 1221, July 1949.

Navigation

(7.2)

- Friedensburg, Walter: Distant-Compass. TM 28, June 1921.
- Eaton, H. N.: Aeronautic Instruments. VII - Aerial Navigation and Navigating Instruments. Rept. 131, 1922.
- Loth, William: Aerial Navigation On the Problem of Guiding Aircraft in a Fog or by Night when There Is No Visibility. TM 57, Jan. 1922.
- Duval, A.: Maps and Navigation Methods. TM 68, March 1922.
- Franck, Captain: Communications and Beacons on Air Routes. TM 69, March 1922.
- Aujames, P.: Some Principles Governing the Establishment of Meteorological Stations Along Air Routes. TM 71, March 1922.
- Easter, Ewing: Notes on Landing Places for Seaplanes Along the Atlantic Coast. TM 72, March 1922.
- Terrisse, M. H.: Airways Laying Out -Marking - Radio Communications -Meteorological Information - Airdromes - Their Operation. MP 6, March 1922.
- Warner, Edward P.: Night Flying. TM 97, May 1922.
- Maffert, Pierre: Aerial Navigation by Dead Reckoning. TM 117, July 1922.

- Stadthagen, Paul: Illumination of Airways and Landing Fields. TM 124, Aug. 1922.
- Cabral, Sacadure: Coutinho-Sacadura Course Corrector. TM 132, Aug. 1922.
- Laboccetta, Letterio: The Vertical Accelermometer, A New Instrument for Air Navigation. TM 232, Oct. 1923.
- Constantin, Louis: Note on a New and Simple Method of Dead Reckoning in Aerial Navigation. TM 239, Nov. 1923.
- Beij, Hilding: Astronomical Methods in Aerial Navigation. Rept. 198, 1924.
- Courtney, F. T.: The Practical Difficulties of Commercial Flying. TM 254, March 1924.
- Le Prieur, Ives: The "Navigraph." TM 320, June 1925.
- Warner, Edward P.: The Drift of an Aircraft Guided Towards Its Destination by Directional Receiving of Radio Signals Transmitted from the Ground. TN 220, June 1925.
- Gregg, W. R.: Meteorological Conditions Along Airways. Rept. 245, 1926.
- Huston, Wilber B.: Accuracy of Airspeed Measurements and Flight Calibration Procedures. TN 1605, June 1948.
- Gracey, William: Position Errors of the Service Airspeed Installations of 10 Airplanes. TN 1892, June 1949.

Ice Prevention and Removal

(7.3)

- Carroll, Thomas and McAvoy, Wm. H.: The Formation of Ice upon Exposed Parts of an Airplane in Flight. TN 293, July 1928.
- Kopp, W.: Danger of Ice Formation on Airplanes. TM 499, Feb. 1929.
- Carroll, Thomas and McAvoy, William H.: The Formation of Ice upon Airplanes in Flight. TN 313, Aug. 1929.
- Geer, William C. and Scott, Merit: The Prevention of Ice Hazard on Airplanes. TN 345, July 1930.
- Clay, William C.: Ice Prevention on Aircraft by Means of Impregnated Leather Covers. ACR, Aug. 1935.
- Committee on Aircraft Accidents: Aircraft Accidents - Method of Analysis. Rept. 576, 1936.
- Rodert, Lewis A.: Investigation of the Ice-Inhibiting Characteristics of Compounds Applied Prior to Flight. ACR, May 1939.
- Rothrock, A. M. and Selden, R. F.: Adhesion of Ice in Its Relation to the De-Icing of Airplanes. TN 723, Aug. 1939.
- The French Committee for the Study of Ice Formation, May 19, 1938: Report on Ice Formation on Aircraft. TM 919, Dec. 1939.
- Kantrowitz, Arthur: Aerodynamic Heating and the Deflection of Drops by an Obstacle in an Air Stream in Relation to Aircraft Icing. TN 779, Oct. 1940.
- Rodert, Lewis A. and Clousing, Lawrence A.: A Flight Investigation of the Thermal Properties of an Exhaust Heated Wing De-Icing System on a Lockheed 12-A Airplane. ARR, June 1941.
- Rodert, Lewis A. and Clousing, Lawrence A.: A Flight Investigation of the Thermal Properties of an Exhaust-Heated-Wing De-Icing System on a Lockheed 12-A Airplane. (Supplement No. 1). ARR, July 1941.
- Rodert, Lewis A. and Clousing, Lawrence A.: A Flight Investigation of the Thermal Properties of an Exhaust-Heated-Wing De-Icing System on a Lockheed 12-A Airplane. (Supplement No. 2). ARR, Sept. 1941.

- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report (Survey), Feb. 1942.
- Rodert, Lewis A. and Jackson, Richard: Preliminary Investigation and Design of an Air-Heated Wing for Lockheed 12-A Airplane. ARR (WR A-34), April 1942.
- Bleeker, W.: The Formation of Ice on Aircraft. TM 1027, Aug. 1942.
- Robitzsch, M.: The Icing of Aircraft. TM 1028, Sept. 1942.
- Martinelli, R. C.; Tribus, M. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. I - Elementary Heat Transfer Considerations in an Airplane. ARR (WR W-23), Oct. 1942.
- Tribus, Myron and Boelter, L. M. K.: An Investigation of Aircraft Heaters. II -Properties of Gases. ARR (WR W-9), Oct. 1942.
- Martinelli, R. C.; Weinberg, E. B.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. III Measured and Predicted Performance of Double Tube Heat Exchangers. ARR (WR W-12), Oct. 1942.
- Martinelli, R. C.; Weinberg, E. B.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. IV Measured and Predicted Performance of Longitudinally Finned Tubes. ARR (WR W-98), Oct. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. V - Theory and Use of Heat Meters for the Measurements of Rate of Heat Transfer Which Are Independent of Time. ARR (WR W-11), Dec. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VI - Heat Transfer Equations for the Single Pass Longitudinal Exchanger. ARR (WR W-10), Dec. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VII - Thermal Radiation from Athermanous Exhaust Gases. ARR (WR W-13), Dec. 1942.

- Martinelli, R. C.; Guibert, A. G.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VIII - A Simplified Method for the Calculation of the Unit Thermal Conductance over Wings. ARR (WR W-14), March 1943.
- Boelter, L. M. K.; Miller, M. A.; Sharp, W. H.; Morrin, E. H.; Iverson, H. W. and Mason, W. E.: An Investigation of Aircraft Heaters. IX Measured and Predicted Performance of Two Exhaust Gas-Air Heat Exchangers and an Apparatus for Evaluating Exhaust Gas-Air Heat Exchangers. ARR (WR W-20), March 1943.
- Boelter, L. M. K.; Dennison, H. G.; Guibert, A. G. and Morrin, E. H.: An Investigation of Aircraft Heaters. X -Measured and Predicted Performance of a Fluted-Type Exhaust Gas and Air Heat Exchanger. ARR (WR W-16), March 1943.
- Boelter, L. M. K.; Miller, M. A.; Sharp, W. H. and Morrin, E. H.: An Investigation of Aircraft Heaters. XI - Measured and Predicted Performance of a Slotted-Fin Exhaust Gas and Air Heat Exchanger. ARR 3D16 (WR W-15), April 1943.
- Boelter, L. M. K.; Dennison, H. G.; Guibert, A. G. and Morrin, E. H.: An Investigation of Aircraft Heaters. XII -Performance of a Formed-Plate Crossflow Exhaust Gas and Air Heat Exchanger. ARR 3E10 (WR W-17), May 1943.
- Boelter, L. M. K.; Guibert, A. G.; Miller, M. A. and Morrin, E. H.: An Investigation of Aircraft Heaters. XIII Performance of Corrugated and Noncorrugated Fluted Type Exhaust-Air Heat Exchangers. ARR 3H26 (WR W-18), Aug. 1943.
- Boelter, L. M. K.; Bromberg, R. and Gier, J. T.: An Investigation of Aircraft Heaters. XV - The Emissivity of Several Materials. ARR 4A21 (WR W-19), Jan. 1944.
- Boelter, L. M. K.; Morrin, E. H.;
 Martinelli, R. C. and Poppendiek, H.
 F.: An Investigation of Aircraft Heaters. XIV An Air and Heat Flow
 Analysis of a Ram-Operated Heater
 and Duct System. ARR 4C01 (WR
 W-21), March 1944.
- Look, Bonne C. and Selna, James: Flight Tests of Several Exhaust-Gas-to-Air Heat Exchangers in a B-17F Airplane. MR (WR A-29), April 1944.

- Boelter, L. M. K. and Sharp, W. H.: An Investigation of Aircraft Heaters. XVI - Determination of the Viscosity of Exhaust Gases from a Gasoline Engine. ARR 4F24 (WR W-22), June 1944.
- Boelter, L. M. K.; Poppendiek, H. F. and Gier, J. T.: An Investigation of Aircraft Heaters. XVII - Experimental Inquiry into Steady State Unidirectional Heat Meter Corrections. ARR 4H09 (WR W-24), Aug. 1944.
- Boelter, L. M. K.; Guibert, A. G.; Rodemacher, J. M. and Sloggy, L. J. B.: An Investigation of Aircraft Heaters. XIX - Performance of Two Finned-Type Crossflow Exhaust Gas and Air Heat Exchangers. ARR 4H21 (WR W-25), Aug. 1944.
- Reuter, J. George and Manson, S. V.: Performance Tests of NACA Type A
 Finned-Tube Exhaust Heat Exchanger.
 ARR E4H22 (WR E-97), Aug. 1944.
- Boelter, L. M. K.; Poppendiek, H. F.; Dunkle, R. V. and Gier, J. T.: An Investigation of Aircraft Heaters. XXIV - The Heat Meter in the Transient State for Unidirectional Heat Transfer. ARR 4107 (WR W-30), Sept. 1944.
- Boelter, L. M. K.; Guibert, A. G.;
 Rademacher, J. M.; Romie, F. E. and
 Sanders, V. D.: An Investigation of
 Aircraft Heaters. XX Measured and
 Predicted Performance of a FinnedType Cast-Aluminum Crossflow Exhaust Gas and Air Heat Exchanger.
 ARR 5A08 (WR W-28), April 1945.
- Boelter, L. M. K.; Guibert, A. G.
 Rademacher, J. M.; Romie, F. E.;
 Sanders, V. D. and Sloggy, L. J. B.:
 An Investigation of Aircraft Heaters.
 XXI Measured and Predicted Performance of a Flattened-Tube Type
 Crossflow Exhaust Gas and Air Heat
 Exchanger. ARR 5A10 (WR W-27),
 April 1945.
- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M. and Romie, F. E.: An Investigation of Aircraft Heaters. XXII - Measured and Predicted Performance of a Fluted-Type Exhaust Gas and Air Heat Exchanger. ARR 5A11 (WR W-26), April 1945.
- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M. and Sanders, V. D.: An Investigation of Aircraft Heaters. XXIII - Measured and Predicted Performance of a Flat-Plate Type Exhaust Gas and Air Heat Exchanger. ARR 5A12 (WR W-29), April 1945.

- Boelter, L. M. K.; Bromberg, R.; Gier, J. T. and Dempster, E. R.: An Investigation of Aircraft Heaters. XXV Use of the Thermopile Radiometer. ARR 5A13 (WR W-88), April 1945.
- Boelter, L. M. K.; Martinelli, R. C.; Romie, F. E. and Morrin, E. H.: An Investigation of Aircraft Heaters. XVIII - A Design Manual for Exhaust Gas and Air Heat Exchangers. ARR 5A06 (WR W-95), Aug. 1945.
- Look, Bonne C.: Effect on the Performance of a Turbosupercharged Engine of an Exhaust-Gas-to-Air Heat Exchanger for Thermal Ice-Prevention. MR A5H23 (WR A-30), Aug. 1945.
- Hillendahl, Wesley H.: A Flight Investigation of the Ice-Prevention Requirements of the United States Naval K-Type Airship. MR A5J19a (WR A-4), Oct. 1945.
- Mulholland, Donald R.; Rollin, Vern G. and Galvin, Herman B.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. I Description of Setup and Testing Technique. MR E5L13 (WR E-170), Dec. 1945.
- Lewis, William: A Flight Investigation of the Meteorological Conditions Conducive to the Formation of Ice on Airplanes. TN 1393, Aug. 1947.
- Preston, G. Merritt and Blackman, Calvin C.: Effects of Ice Formations on Airplane Performance in Level Cruising Flight. TN 1598, May 1948.
- Guibert, A. G.; Janssen, E. and Robbins, W. M.: Determination of Rate, Area, and Distribution of Impingement of Waterdrops on Various Airfoils from Trajectories Obtained on the Differential Analyzer. RM 9A05, Feb. 1949.
- Jones, Alun R. and Lewis, William: Recommended Values of Meteorological Factors to be Considered in the Design of Aircraft Ice-Prevention Equipment. TN 1855, March 1949.

ENGINE INDUCTION SYSTEMS

(7.3.1)

- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report, Feb. 1942.
- Kimball, Leo B.: Icing Tests of Aircraft-Engine Induction Systems. ARR (WR W-97), Jan. 1943.

- Essex, Henry A. and Galvin, Herman B.:
 A Laboratory Investigation of Icing and
 Heated-Air De-Icing of a ChandlerEvans 1900 CPB-3 Carburetor Mounted
 on a Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J03 (WR E-15), Oct. 1944.
- Galvin, Herman B. and Essex, Henry A.:
 Fluid De-Icing Tests on a ChandlerEvans 1900 CPB-3 Carburetor Mounted
 on a Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J06 (WR E-12), Oct. 1944.
- Galvin, Herman B. and Essex, Henry A.:
 A Laboratory Investigation of the Icing
 Characteristics of the Bendix-Stromberg Carburetor Model PD-12F5 with
 the Pratt & Whitney R-1830-C4 Intermediate Rear Engine Section. ARR
 E4J18 (WR E-18), Oct. 1944.
- Hardy, J. K.: Kinetic Temperature of Wet Surfaces. A Method of Calculating the Amount of Alcohol Required to Prevent Ice, and the Derivation of the Psychrometric Equation. ARR 5G13 (WR A-8), July 1945.
- Essex, Henry A.; Keith, Wayne C. and Mulholland, Donald E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. II Determination of Limiting-Icing Conditions. MR E5L18a (WR E-171), Dec. 1945.
- Lyons, Richard E. and Coles, Willard D.:
 Laboratory Investigation of Icing in the
 Carburetor and Supercharger Inlet
 Elbow of the Lockheed P-38J Airplane.
 III Heated Air as a Means of De-Icing
 the Carburetor and Inlet Elbow. MR
 E5L19 (WR E-172), Dec. 1945.
- Renner, Clark E.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. V Effect of Injection of Water-Fuel Mixtures and Water-Ethanol-Fuel Mixtures on the Icing Characteristics. MR E5L28 (WR E-174), Dec. 1945.
- Chapman, G. E. and Zlotowski, E. D.:
 Laboratory Investigation of Icing in
 the Carburetor and Supercharger Inlet
 Elbow of the Lockheed P-38J Airplane.
 IV Effect of Throttle Designs and
 Method of Throttle Operation on Induction-System Icing Characteristics. MR
 E5L27 (WR E-173), Jan. 1946.
- Mulholland, Donald R. and Chapman, Gilbert E.: Laboratory Investigations of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. VI Effect of Modifications to Fuel-Spray Nozzle on Icing Characteristics. MR E6A23 (WR E-175), Jan. 1946.

- Engine Induction Systems (Cont.)
- Essex, Henry A.; Zlotowski, Edward and Ellisman, Carl: Investigation of Ice Formation in the Induction System of a Lockheed P-38J Airplane. I - Ground Tests. MR E6B28 (WR E-176), March 1946.
- Essex, Henry A.; Ellisman, Carl and Zlotowski, Edward D.: Investigation of Ice Formation in the Induction System of the Lockheed P-38J Airplane. II Flight Tests. MR E6E16 (WR E-177), June 1946.
- Rollin, Vern G.: The Effect of Liquid and Ice Particles on the Erosion of a Supercharger-Inlet Cover and Diffuser Vanes. MR E6E31 (WR E-178), June 1946.
- Chapman, Gilbert E.: A Preliminary Investigation of the Icing Characteristics of the Chandler-Evans 58 CPB-4 Carburetor. MR E6G11 (WR E-284), July 1946.
- Von Glahn, Uwe and Renner, Clark E.: Development of a Protected Air Scoop for the Reduction of Induction-System Icing. TN 1134, Sept. 1946.
- Coles, Willard D.: Laboratory Investigation of Ice Formation and Eliminating in the Induction System of a Large Twin-Engine Cargo Aircraft. TN 1427, Sept. 1947.
- Coles, Willard D.: Investigation of Icing Characteristics of Typical Light-Airplane Engine Induction Systems. TN 1790, Feb. 1949.

PROPELLERS

(7.3.2)

- Clay, William C.: The Prevention of Ice Formation on Propellers. ACR, Oct. 1937.
- Rodert, Lewis A.: A Flight Investigation of the Distribution of Ice-Inhibiting Fluids on a Propeller Blade. TN 727, Sept. 1939.
- Rodert, Lewis A.: The Effects of Aerodynamic Heating on Ice Formations on Airplane Propellers. TN 799, March 1941.
- Rodert, Lewis A.; Clousing, Lawrence A. and McAvoy, William H.: Recent Flight Research on Ice Prevention. ARR, Jan. 1942.
- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report, Feb. 1942.

- Scherrer, Richard and Rodert, Lewis A.: Tests of Thermal-Electric De-Icing Equipment for Propellers. ARR 4A20 (WR A-47), Jan. 1944.
- Neel, Carr B., Jr.: An Investigation of the Characteristics of a Propeller Alcohol Feed Ring. RB 4F06 (WR A-50), June 1944.
- Scherrer, Richard: An Analytical Investigation of Thermal-Electric Means of Preventing Ice Formations on a Propeller Blade. ACR 4H31 (WR A-17), Aug. 1944.
- Hardy, J. K.: Kinetic Temperature of Wet Surfaces. A Method of Calculating the Amount of Alcohol Required to Prevent Ice, and the Derivation of the Psychrometric Equation. ARR 5G13 (WR A-8), July 1945.
- Corson, Blake W., Jr. and Maynard, Julian D.: The Effect of Simulated Icing on Propeller Performance. TN 1084, June 1946.
- Corson, Blake W., Jr. and Maynard, Julian D.: Investigation of the Effect of a Tip Modification and Thermal De-Icing Air Flow on Propeller Performance. TN 1111, July 1946.
- Darsow, John F. and Selna, James: A Flight Investigation of the Thermal Performance of an Air-Heated Propeller. TN 1178, April 1947.
- Gray, V. H. and Campbell, R. G.: A Method for Estimating Heat Requirements for Ice Prevention on Gas-Heated Hollow Propeller Blades. TN 1494, Dec. 1947.
- Lewis, James P.: De-Icing Effectiveness of External Electric Heaters for Propeller Blades. TN 1520, Feb. 1948.
- Gray, W. H. and Davidson, R. E.: The Effect of Tip Modification and Thermal De-Icing Air Flow on Propeller Performance as Determined from Wind-Tunnel Tests. TN 1540, Feb. 1948.
- Mulholland, Donald R. and Perkins, Porter J.: Investigation of Effectiveness of Air-Heating a Hollow Steel Propeller for Protection Against Icing. I Unpartitioned Propeller Blades. TN 1586, May 1948.
- Perkins, Porter J. and Mulholland, Donald R.: Investigation of Effectiveness of Air-Heating a Hollow Steel Propeller for Protection Against Icing. II - 50-Percent Partitioned Blades. TN 1587, May 1948.

- Propellers (Cont.)
- Mulholland, Donald R. and Perkins, Porter J.: Investigation of Effectiveness of Air-Heating a Hollow Steel Propeller for Protection Against Icing. III 25-Percent Partitioned Blades. TN 1588, May 1948.
- Lewis, James P. and Stevens, Howard C., Jr.: Icing and De-Icing of a Propeller with Internal Electric Blade Heaters. TN 1691, Aug. 1948.
- Guibert, A. G.; Janssen, E. and Robbins, W. M.: Determination of Rate, Area, and Distribution of Impingement of Waterdrops on Various Airfoils from Trajectories Obtained on the Differential Analyzer. RM 9A05, Feb. 1949.
- Perkins, Porter J. and Millenson, Morton B.: An Electric Thrust Meter Suitable for Flight Investigation of Propellers. RM E9C17, May 1949.

WINGS AND TAILS

(7.3.3)

- Anon.: Ice Formation on Wings and Other Structural Parts of Aircraft. (Preliminary Report). MP 20, March 1928.
- Knight, Montgomery and Clay, William C.: Refrigerated Wind Tunnel Tests on Surface Coatings for Preventing Ice Formation. TN 339, May 1930.
- Theodorsen, Theodore and Clay, William C.: Ice Prevention on Aircraft by Means of Engine Exhaust Heat and a Technical Study of Heat Transmission from a Clark Y Airfoil. Rept. 403, 1931.
- Samuels, L. T.: Meteorological Conditions During the Formation of Ice on Aircraft. TN 439, Dec. 1932.
- Gulick, Beverly G.: Effects of a Simulated Ice Formation on the Aerodynamic Characteristics of an Airfoil. ACR (WR L-292), May 1938.
- Robinson, Russell G.: The Drag of Inflatable Rubber De-Icers. TN 669, Oct. 1938.
- Rodert, Lewis A.: A Preliminary Study of the Prevention of Ice on Aircraft by the Use of Engine-Exhaust Heat. TN 712, June 1939.
- Rodert, Lewis A. and Jones, Alun R.: Profile-Drag Investigation of an Airplane Wing Equipped with Rubber Inflatable De-Icer. ACR, Dec. 1939.

- Rodert, Lewis A. and Jones, Alun R.: A Flight Investigation of Exhaust-Heat De-Icing. TN 783, Nov. 1940.
- Rodert, Lewis A. and Clousing, Lawrence A.: A Flight Investigation of the Thermal Properties of an Exhaust Heated Wing De-Icing System on a Lockheed 12-A Airplane. ARR, June 1941.
- Rodert, Lewis A.; Clousing, Lawrence A. and McAvoy, William H.: Recent Flight Research on Ice Prevention. ARR, Jan. 1942.
- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report, Feb. 1942.
- Rodert, Lewis A. and Jackson, Richard:
 Preliminary Investigation and Design
 of an Air-Heated Wing for Lockheed
 12-A Airplane. ARR, April 1942.
- Jones, Alun R. and Zalovcik, John A.: Flight Investigation of a Stall-Warning Indicator for Operation Under Icing Conditions. RB (WR L-503), July 1942.
- Rodert, Lewis A. and Jackson, Richard: A Description of the Ju 88 Airplane Anti-Icing Equipment. RB, Aug. 1942.
- Jones, Alun R. and Rodert, Lewis A.:
 Development of Thermal Ice-Prevention Equipment for the B-24D Airplane.
 ACR (WR A-35), Feb. 1943.
- Jones, Alun R. and Rodert, Lewis A.: Development of Thermal Ice-Prevention Equipment for the B-17F Airplane. ARR 3H24 (WR A-51), Aug. 1943.
- Scherrer, Richard: Flight Tests of Thermal Ice-Prevention Equipment on a Lockheed 12-A Airplane. ARR 3K10 (WR A-49), Sept. 1943.
- Neel, Carr B. and Jones, Alun R.: Flight Tests of Thermal Ice-Prevention Equipment in the XB-24F Airplane. RMR (WR A-7), Oct. 1943.
- Look, Bonne C.: Flight Tests of the Thermal Ice-Prevention Equipment on the B-17F Airplane. ARR 4B02 (WR A-23), Feb. 1944.
- Hardy, J. K.: An Analysis of the Dissipation of Heat in Conditions of Icing from a Section of the Wing of the C-46 Airplane. Rept. 831, 1945.
- Jones, Alun R.: An Investigation of a Thermal Ice-Prevention System for a Twin-Engine Transport Airplane. (Based on Previously Issued Reports, ARR's 5A03, 5A03a, b & c, 5C20, 5D06, 5G20). Rept. 862, 1946.

- Harris, Maxwell and Schlaff, Bernard A.:
 An Investigation of a Thermal Ice-Prevention System for a Cargo Airplane.
 VIII Metallurgical Examination of the Wing Leading-Edge Structure After 225 Hours of Flight Operation of the Thermal System. TN 1235, April 1947.
- Neel, Carr B., Jr.; Bergrun, Norman R.; Jukoff, David and Schlaff, Bernard A.: The Calculation of the Heat Required for Wing Thermal Ice Prevention in Specified Icing Conditions. TN 1472, Dec. 1947.
- Schlaff, Bernard A. and Selna, James: An Investigation of a Thermal Ice-Prevention System for a Cargo Airplane. IX The Temperature of the Wing-Leading-Edge Structure as Established in Flight. TN 1599, June 1948.
- Holdaway, George H.: Corrosion Tests of a Heated Wing Utilizing an Exhaust-Gas-Air Mixture for Ice-Prevention. TN 1791, Jan. 1949.
- Guibert, A. G.; Janssen, E. and Robbins, W. M.: Determination of Rate, Area, and Distribution of Impingement of Waterdrops on Various Airfoils from Trajectories Obtained on the Differential Analyzer. RM 9A05, Feb. 1949.

WINDSHIELDS

(7.3.4)

- Clay, William C.: Improved Airplane Windshields to Provide Vision in Stormy Weather. Rept. 498, 1934.
- Rodert, Lewis A.: Investigation of an Electrically Heated Airplane Windshield for Ice Prevention. ACR, March 1939.
- Rodert, Lewis A.: An Investigation of the Prevention of Ice on the Airplane Windshield. TN 754, March 1940.
- Rodert, Lewis A.; Clousing, Lawrence A. and McAvoy, William H.: Recent Flight Research on Ice Prevention. ARR, Jan. 1942.
- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report, Feb. 1942.
- Kushnick, Jerome L.: Thermodynamic Design of Double-Panel, Air-Heated Windshields for Ice Prevention. RB 3F24 (WR A-56), June 1943.
- Jones, Alun R. and Rodert, Lewis A.: Development of Thermal Ice-Prevention Equipment for the B-17F Airplane. ARR 3H24 (WR A-51), Aug. 1943.

- Neel, Carr B. and Jones, Alun R.: Flight Tests of Thermal Ice-Prevention Equipment in the XB-24F Airplane. MR (WR A-7), Oct. 1943.
- Scherrer, Richard: Flight Tests of Thermal Ice-Prevention Equipment on a Lockheed 12-A Airplane. ARR 3K10 (WR A-49), Nov. 1943.
- Look, Bonne C.: Flight Tests of the Thermal Ice-Prevention Equipment on the B-17F Airplane. ARR 4B02 (WR A-23), Feb. 1944.
- Scherrer, Richard and Young, Clair F.:
 An Investigation of the Characteristics of Alcohol-Distribution Tubes Used for Ice Protection on Aircraft Windshields. ARR 4B26 (WR A-20), Feb. 1944.
- Jones, Alun R.: An Investigation of a Thermal Ice-Prevention System for a Twin-Engine Transport Airplane. (Based on Previously Issued Reports ARR's 5A03, 5A03a, b, c, 5C20, 5D06, 5G20). Rept. 863, 1946.
- Kleinknecht, Kenneth S.: Flight Investigation of the Heat Requirements for Ice Prevention on Aircraft Windshields. RM E7G28, Sept. 1947.
- Jones, Alun R.; Holdaway, George H. and Steinmetz, Charles P.: A Method for Calculating the Heat Required for Windshield Thermal Ice Prevention Based on Extensive Flight Tests in Natural Icing Conditions. TN 1434, Nov. 1947.

MISCELLANEOUS ACCESSORIES

(7.3.5)

- Theodorsen, Theodore and Clay, William C.: The Prevention of Ice Formation on Gasoline Tank Vents. TN 394, Oct. 1931.
- Rodert, Lewis A.; McAvoy, William H. and Clousing, Lawrence A.: Preliminary Report on Flight Tests of an Airplane Having Exhaust-Heated Wings. ARR, April 1941.
- Rodert, Lewis A.; Clousing, Lawrence A. and McAvoy, William H.: Recent Flight Research on Ice Prevention. ARR, Jan. 1942.
- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report, Feb. 1942.
- Hillendahl, Wesley H.: Analysis of a Thermal Ice-Prevention System for Wing Leading-Edge Landing-Light Installation. ARR 4A11, Jan. 1944.

Miscellaneous Accessories (Cont.)

- Hillendahl, Wesley H.: Tests of a Thermal Ice-Prevention System for a Wing Leading-Edge Landing-Light Installation. MR A4L11, Dec. 1944.
- Jones, Alun R.: An Investigation of a Thermal Ice-Prevention System for a Twin-Engine Transport Airplane. (Based on Previously Issued Reports ARR's 5A03, 5A03a, b, c, 5C20, 5D06, 5G20). Rept. 862, 1946.
- Kepple, William L.: Determination of Aircraft Antenna Loads Produced by Natural Icing Conditions. RM E7H26a, Feb. 1948.
- Guibert, A. G.; Janssen, E. and Robbins, W. M.: Determination of Rate, Area, and Distribution of Impingement of Waterdrops on Various Airfoils from Trajectories Obtained on the Differential Analyzer. RM 9A05, Feb. 1949.
- Ruggeri, Robert S.; von Glahn, Uwe and Rollin, Vern G.: Investigation of Aerodynamic and Icing Characteristics of Recessed Fuel-Vent Configurations. TN 1789, March 1949.

PROPULSION SYSTEMS

(7.3.6)

- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR Report, Feb. 1942.
- Essex, Henry A.: De-Icing of an Aircraft-Engine Induction System. ARR 3H13 (WR W-45), Aug. 1943.
- Lyons, Richard E. and Coles, Willard D.:
 Laboratory Investigation of Icing in the
 Carburetor and Supercharger Inlet
 Elbow of the Lockheed P-38J Airplane.
 III Heated Air as a Means of De-Icing
 the Carburetor and Inlet Elbow. MR
 E5L19 (WR E-172), Dec. 1945.
- Lewis, James P.: Wind-Tunnel Investigation of Icing of an Engine Cooling-Fan Installation. TN 1246, April 1947.
- Callaghan, Edmund E. and Ruggeri, Robert S.: Investigation of the Penetration of an Air Jet Directed Perpendicularly to an Air Stream. TN 1615, June 1948.
- Lewis, William and Hoecker, Walter H., Jr.: Observations of Icing Conditions Encountered in Flight During 1948. TN 1904, June 1949.

Noise

(7.4)

- Diederichs, H. and Upton, G. B.: Mufflers for Aeronautic Engines. Rept. 10, 1916.
- Upton, G. B. and Gage, V. R.: Investigation of the Muffling Problem for Airplane Engines. Rept. 55, 1919.
- Dollfus, Charles: "Schneebeli" and "Birger" Silencers. TM 213, June 1923.
- Robrovsky, T.: Device for Measuring Sound in Airplane Engines. TM 266, June 1924.
- Tucker, W. S.: The Problem of Noise in Civil Aircraft and the Possibilities of Its Elimination. Part I. TM 473, July 1928.
- Tucker, W. S.: The Problem of Noise in Civil Aircraft and the Possibilities of Its Elimination. Part II. TM 473, Aug. 1928.
- Theodorsen, Theodore: A New Principle of Sound Frequency Analysis. Rept. 391, 1931.
- Stowell, E. Z. and Deming, A. F.: Noise from Two-Blade Propellers. Rept. 526, 1935.
- Stowell, E. Z. and Deming, A. F.: Acoustical Properties of the McCauley Propeller. MR, July 1935.
- Ernsthausen, W.: The Source of Propeller Noise. TM 825, May 1937.
- Deming, A. F.: Noise from Propellers with Symmetrical Sections at Zero Blade Angle. TN 605, July 1937.
- Deming, A. F.: Noise from Propellers with Symmetrical Sections at Zero Blade Angle, II. TN 679, Dec. 1938.
- Deming, Arthur F.: Propeller Rotation Noise Due to Torque and Thrust. TN 747, Jan. 1940.
- London, Albert: Principles, Practice, and Progress of Noise Reduction in Airplanes. TN 748, Jan. 1940.
- Lesley, E. P.: Tandem Air Propellers II. TN 822, Aug. 1941.

- Theodorsen, Theodore and Regier, Arthur A.: The Problem of Noise Reduction with Reference to Light Airplanes. TN 1145, Aug. 1946.
- Yudin, E. Y.: On the Vortex Sound from Rotating Rods. TM 1136, March 1947.
- Regier, Arthur A.: Effect of Distance on Airplane Noise. TN 1353, June 1947.
- Crigler, John L. and Jaquis, Robert E.: Propeller-Efficiency Charts for Light Airplanes. TN 1338, July 1947.
- Hicks, Chester W. and Hubbard, Harvey H.: Comparison of Sound Emission from Two-Blade, Four-Blade, and Seven-Blade Propellers. TN 1354, July 1947.
- Hubbard, Harvey H. and Regier, Arthur A.: Propeller-Loudness Charts for Light Airplanes. TN 1358, July 1947.
- Regier, Arthur A. and Hubbard, Harvey H.: Factors Affecting the Design of Quiet Propellers. RM L7H05, Aug. 1947.
- Regier, Arthur A. and Hubbard, Harvey H.: Factors Affecting the Design of Quiet Propellers. RM L7H05, Sept. 1947.
- Vogeley, A. W.: Sound-Level Measurements of a Light Airplane Modified to Reduce Noise Reaching the Ground. TN 1647, July 1948.
- Hubbard, Harvey H.: Sound from Dual-Rotating and Multiple Single-Rotating Propellers. TN 1654, July 1948.
- Gutin, L.: On the Sound Field of a Rotating Propeller. TM 1195, Oct. 1948.
- Czarnecki, K. R. and Davis, Don D., Jr.:
 Dynamometer-Stand Investigation of
 the Muffler Used in the Demonstration
 of Light-Airplane Noise Reduction.
 TN 1688, Oct. 1948.
- Davis, Don D., Jr. and Czarnecki, K. R.: Dynamometer-Stand Investigation of a Group of Mufflers. TN 1838, March 1949.
- Hubbard, Harvey H. and Regier, Arthur A.: Free-Space Oscillating Pressures Near the Tips of Rotating Propellers. TN 1870, April 1949.

Heating and Ventilating

(7.5)

- Warner, Edward P.: Comfort in Flight. TM 106, June 1922.
- Kurz, Gerhard: Measurement of Visibility from the Pilot's Cockpit on Different Airplane Types. TM 646, Nov. 1931.
- Martinelli, R. C.; Tribus, M. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. I - Elementary Heat Transfer Considerations in an Airplane. ARR (WR W-23), Oct. 1942.
- Tribus, Myron and Boelter, L. M. K.: An Investigation of Aircraft Heaters. II Properties of Gases. ARR (WR W-9) Oct. 1942.
- Martinelli, R. C.; Weinberg, E. B.;
 Morrin, E. H. and Boelter, L. M. K.:
 An Investigation of Aircraft Heaters.
 III Measured and Predicted Performance of Double Tube Heat Exchangers.
 ARR (WR W-12), Oct. 1942.
- Martinelli, R. C.; Weinberg, E. B.;
 Morrin, E. H. and Boelter, L. M. K.:
 An Investigation of Aircraft Heaters.
 IV Measured and Predicted Performance of Longitudinally Finned Tubes.
 ARR (WR W-98), Oct. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. V - Theory and Use of Heat Meters for the Measurements of Rate of Heat Transfer Which are Independent of Time. ARR (WR W-11), Dec. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K. An Investigation of Aircraft Heaters. VI - Heat Transfer Equations for the Single Pass Longitudinal Exchanger. ARR (WR W-10), Dec. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VII - Thermal Radiation from Athermanous Exhaust Gases. ARR (WR W-13), Dec. 1942.
- Martinelli, R. C.; Guibert, A. G.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. VIII A Simplified Method for the Calculation of the Unit Thermal Conductance over Wings. ARR (WR W-14), March 1943.

- Boelter, L. M. K.; Miller, M. A.; Sharp, W.H.: Morrin, E. H.; Iverson, H. W. and Mason, W. E.: An Investigation of Aircraft Heaters. IX Measured and Predicted Performance of Two Exhaust Gas-Air Heat Exchangers and an Apparatus for Evaluating Exhaust Gas-Air Heat Exchangers. ARR (WR W-20), March 1943.
- Boelter, L. M. K.; Dennison, H. G.; Guibert, A. G. and Morrin, E. H.: An Investigation of Aircraft Heaters. X -Measured and Predicted Performance of a Fluted-Type Exhaust Gas and Air Heat Exchanger. ARR (WR W-16), March 1943.
- Boelter, L. M. K.; Miller, M. A.; Sharp, W. H. and Morrin, E. H.: An Investigation of Aircraft Heaters. XI Measured and Predicted Performance of a Slotted-Fin Exhaust Gas and Air Heat Exchanger. ARR 3D16 (WR W-15), April 1943.
- Boelter, L. M. K.; Dennison, H. G.; Guibert, A. G. and Morrin, E. H.: An Investigation of Aircraft Heaters. XII -Performance of a Formed-Plate Cross-Flow Exhaust Gas and Air Heat Exchanger. ARR 3E10(WR W-17), May 1943.
- Boelter, L. M. K.; Guibert, A. G.; Miller, M. A. and Morrin, E. H.: An Investigation of Aircraft Heaters. XIII Performance of Corrugated and Noncorrugated Fluted Type Exhaust Gas-Air Heat Exchangers. ARR 3H26 (WR W-18), Aug. 1943.
- Boelter, L. M. K.; Bromberg, R. and Gier, J. T.: An Investigation of Aircraft Heaters. XV - The Emissivity of Several Materials. ARR 4A21 (WR W-19), Jan. 1944.
- Boelter, L. M. K.; Morrin, E. H.; Martinellí, R. C. and Poppendiek, H. F.: An Investigation of Aircraft Heaters. XIV - An Air and Heat Flow Analysis of a Ram-Operated Heater and Duct System. ARR 4C01 (WR W-21), March 1944.
- Look, Bonne C. and Selna, James: Flight Tests of Several Exhaust-Gas-to-Air Heat Exchangers in a B-17F Airplane. MR (WR A-29), April 1944.

- Boelter, L. M. K. and Sharp, W. H.: An Investigation of Aircraft Heaters. XVI - Determination of the Viscosity of Exhaust Gases from a Gasoline Engine. ARR 4F24 (WR W-22), June 1944.
- Boelter, L. M. K.; Poppendiek, H. F. and Gier, J. T .: An Investigation of Aircraft Heaters. XVII - Experimental Inquiry into Steady State Unidirectional Heat Meter Corrections. ARR 4H09 (WR W-24), Aug. 1944.
- Boelter, L. M. K.; Guibert, A. G.; Rade-macher, J. M. and Sloggy, L. J. B.: An Investigation of Aircraft Heaters. XIX - Performance of Two Finned-Type Crossflow Exhaust Gas and Air Heat Exchangers. ARR 4H21 (WR W-25), Aug. 1944.
- Reuter, J. George and Manson, S. V.: Performance Tests of NACA Type A Finned-Tube Exhaust Heat Exchanger. ARR E4H22 (WR E-97), Aug. 1944.
- Boelter, L. M. K.; Poppendiek, H. F.; Dunkle, R. V. and Gier, J. T.: An Investigation of Aircraft Heaters. XXIV - The Heat Meter in the Transient State for Unidirectional Heat Transfer. ARR 4107 (WR W-30), Sept. 1944.
- Boelter, L. M. K.; Guibert, A. G.; Rade-macher, J. M.; Romie, F. E. and Sanders, V. D.: An Investigation of Aircraft Heaters. XX Measured and Predicted Performance of a Finned-Type Cast-Aluminum Crossflow Exhaust Gas and Air Heat Exchanger. ARR 5A08 (WR W-28), April 1945.
- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M.; Romie, F. E.; Sanders, V. D. and Sloggy, L. J. B.: An Investigation of Aircraft Heaters. XXI - Measured and Predicted Performance of a Flattened-Tube Type Crossflow Exhaust Gas and Air Heat Exchanger. ARR 5A10 (WR W-27), April 1945.

- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M. and Romie, F. E .: An Investigation of Aircraft Heaters. XXII - Measured and Predicted Performance of a Fluted-Type Exhaust Gas and Air Heat Exchanger. ARR 5A11 (WR W-26), April 1945.
- Boelter, L. M. K.; Guibert, A. G.; Rademacher, J. M. and Sanders, V. D.: An Investigation of Aircraft Heaters. XXIII - Measured and Predicted Performance of a Flat-Plate Type Exhaust Gas and Air Heat Exchanger. ARR 5A12 (WR W-29), April 1945.
- Boelter, L. M. K.; Bromberg, R.; Gier, J. T. and Dempster, E. R.: An Investigation of Aircraft Heaters. XXV -Use of the Thermopile Radiometer. ARR 5A13 (WR W-88), April 1945.
- Boelter, L. M. K.; Martinelli, R. C.; Romie, F. E. and Morrin, E. H.: An Investigation of Aircraft Heaters. XVIII - A Design Manual for Exhaust Gas and Air Heat Exchangers. ARR 5A06 (WR W-95), Aug. 1945.
- Zeiller, E. Lewis and Dornbrand, Harry: Convective Heating and Ventilation of Airplane Cabins. ARR A5K29, Nov. 1945.
- Stalder, Jackson R. ard Zeiller, E. Lewis: A Method for the Determination of Air Infiltration Rates in Airplane Cabins. TN 1017, April 1946.
- Danforth, Edward C. B., III and Reeder, John P .: Flight Measurements of Internal Cockpit Pressures in Several Fighter-Type Airplanes. TN 1173, Feb. 1947.
- Selna, James and Zerbe, John: A Method for Calculating the Heat Required for the Prevention of Fog Formations on the Inside Surfaces of Bullet-Resisting Windshields During Diving Flight. TN 1301, July 1947.
- Manson, S. V.: Simulated-Altitude Investigation of Performance of Tubular Aircraft Oil Coolers. TN 1567, April

Lightning Hazards

(7.6)

- From the German Translation of the Original Spanish by Emilio Herrera, "Luftfahrt," April 15, 1924: Balloon Flight and Atmospheric Electricity. TM 271, July 1924.
- Koppe, Heinrich: Practical Experiences with Lightning Discharges to Airplanes. TM 730, Dec. 1933.
- Special Committee on Hazards to Aircraft NACA: Hazards to Aircraft Due to Electrical Phenomena. TN 494, March 1934.
- Harrison, L. P.: Preliminary Report on Atmospheric Electrical Discharges to Aircraft. ARR, Aug. 1941.
- Workman, E. J. and Holzer, R. E.: A Preliminary Investigation of the Electrical Structure of Thunderstorms. TN 850, July 1942.
- Workman, E. J.; Holzer, R. E. and Pelsor, G. T.: The Electrical Structure of Thunderstorms. TN 864, Nov. 1942.

inforch, Toward C. B., Dr. and Reeder John P. - Ff. At Messembreche of C remail Congrit Pressures Transport

- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. I-General Analysis. ARR 3I10 (WR W-59), Sept. 1943.
- High Voltage Laboratory, National Bureau of Standards: Frotection of Nonmetallic Aircraft from Lightning. II - Lightning Conductor Materials. ARR 3J12 (WR W-60), Oct. 1943.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. III - Electrical Effects in Glider Towlines. ARR 4C20 (WR W-62), March 1944.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. IV Electrocution Hazards from Inductive Voltages. ARR 4I28 (WR W-85), March 1945.
- Harrison, L. P.: Lightning Discharges to Aircraft and Associated Meteorological Conditions. TN 1001, May 1946.

Piloting Techniques

(7.7)

- Prandtl, L.: Some Remarks Concerning Soaring Flight. TM 47, Oct. 1921.
- Aujames, P.: Some Principles Governing the Establishment of Meteorological Stations Along Air Routes. TM 71, March 1922.
- Easter, Ewing: Notes on Landing Places for Seaplanes Along the Atlantic Coast. TM 72, March 1922.
- Diehl, Walter S.: Simple Formula for Estimating Airplane Ceilings. TN 103, June 1922.
- Ravennes, Jean: Maritime Aviation. TM 109, July 1922.
- Rohrbach, Adolf: Structural Safety During Curved Flight. TN 107, Aug. 1922.
- Georgii, W.: Static Soaring Flight Over Flat Sea Coasts. TM 235, Nov. 1923.
- Constantin, Louis: Note on a New and Simple Method of Dead Reckoning in Aerial Navigation. TM 239, Nov. 1923.
- Devalues, F.: Investigations of Aviation Accidents and Lessons to be Drawn from Them. TM 245, Jan. 1924.
- Courtney, F. T.: The Practical Difficulties of Commercial Flying. TM 254, March 1924.
- Warner, Edward P.: The Drift of an Aircraft Guided Towards Its Destination by Directional Receiving of Radio Signals Transmitted from the Ground. TN 220, June 1925.
- Pröll, A.: Take-off Distance for Airplanes. TM 381, Sept. 1926.
- Carroll, Thomas: A Dangerous Seaplane Landing Condition. TN 287, May 1928.
- Richardson, H. C.: The Reaction on a Float Bottom When Making Contact with Water at High Speeds. TN 288, May 1928.
- Carroll, Thomas and DeFrance, Smith J.: The Use of Wheel Brakes on Airplanes. TN 311, July 1929.
- Sabatier, J.: Fire Prevention on Airplanes Part I. TM 536, Oct. 1929.

- Sabatier, J.: Fire Prevention on Airplanes - Part II. TM 537, Oct. 1929.
- Weick, Fred E.: The Behavior of Conventional Airplanes in Situations
 Thought to Lead to Most Crashes. TN 363, Feb. 1931.
- Blenk, Hermann; Hertel, Heinrich and Thalau, Karl: The German Investigation of the Accident at Meopham (England). TM 669, April 1932.
- Shoemaker, James M. and Dawson, John R.: The Effect of Trim Angle on the Take-Off Performance of a Flying Boat. TN 486, Jan. 1934.
- Bernson, Reysa: Ascension and Catastrophe of the Russian Stratosphere Balloon "Ossoaviakhim-1." MP 39, Aug. 1934.
- Committee on Aircraft Accidents: Aircraft Accidents--Method of Analysis. Rept. 576, 1936.
- Gough, Melvin N.: Notes on the Technique of Landing Airplanes Equipped with Wing Flaps. TN 553, Jan. 1936.
- McAvoy, W. H.: Piloting Technique for Recovery from Spins. TN 555, Feb. 1936.
- Scudder, N. F. and Kirschbaum, H. W.: Further Measurements of Normal Accelerations on Racing Airplanes. TN 556, Feb. 1936.
- Jones, Robert T.: Accelerations in Landing with a Tricycle-Type Landing Gear. ACR, Feb. 1937.
- Wenzinger, Carl J. and Kantrowitz, A. R.: Notes on Factors Affecting Geometrical Arrangement of Tricycle-Type Landing Gears. ACR, April 1937.
- Söule, H. A. and Hootman, James A.: Flight Tests of an Airplane Showing Dependence of the Maximum Lift Coefficient on the Test Conditions. TN 622, Nov. 1937.
- Wetmore, J. W.: The Transition Phase in the Take-Off of an Airplane. Rept. 626, 1938.
- Beseler, Joachim: Armament of Enemy Aircraft. MP 45, June 1940.

- Harmon, S. M.: Aerodynamic Factors
 Affecting the Ability of a Pilot to Return an Airplane to Level from a
 Banked Attitude by Use of the Rudder
 Alone and Without Change of Heading.
 ARR (WR L-365), Oct. 1941.
- Vensel, Joseph R.: Flight Measurements of the Elevator Deflections Used in Landings of Several Airplanes. ARR (WR L-248), Nov. 1941.
- Klemperer, W. B.: Investigation of the Forces Acting on Gliders in Automobile-, Pulley-, Winch-, and Airplane-Towed Flight. TN 844, March 1942.
- Pearson, H. A.: Progress in the Investigation of Condensation Trails Left by Airplanes in Flight. CB, March 1942.
- Rhode, Richard V.: Observation of Condensation Trails Formed by XC-35
 Airplane Over Langley Field, Va.,
 July 17, 1941. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Notes on Prediction and Elimination of Exhaust Type Condensation Trails. CB, Sept. 1942.
- Rhode, Richard V. and Pearson, H. A.: Condensation Trails - Where They Occur and What Can Be Done About Them. CB (WR L-474), Sept. 1942.
- Clousing, Lawrence A.; Gadeberg, Burnett L. and Kauffman, William M.: Calculated and Measured Turning Performance of a Navy F2A-3 Airplane as Affected by the Use of Flaps. ACR 3I30 (WR W-6), Sept. 1943.
- Benson, James M.: Piloting of Flying Boats with Special Reference to Forpoising and Skipping. TN 923, Feb. 1944.
- Walker, Walter G.: Notes on Unusual V-G Records from Transport Airplanes. RB L4H17 (WR L-36), Aug. 1944.
- Putnam, Abbott A.: An Analysis of Life Expectancy of Airplane Wings in Normal Cruising Flight. Rept. 805, 1945.
- Moskovitz, A. I.: XC-35 Gust Research Project Characteristics of Vertical Drafts and Associated Vertical-Gust Velocities Within Convective-Type Clouds. RB L5A03 (WR L-554), Jan. 1945.
- Reisert, Thomas D.: Frequency of Occurrence of Critical Gust Loads on Overloaded Airplanes. ARR L5B14 (WR L-73), March 1945.

- Benson, James M. and Bidwell, Jerold M.:
 Bibliography and Review of Information
 Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230),
 Sept. 1945.
- Chapman, G. E. and Zlotowski, E. D.:
 Laboratory Investigation of Icing in
 the Carburetor and Supercharger Inlet
 Elbow of the Lockheed P-38J Airplane.
 IV Effect of Throttle Designs and
 Method of Throttle Operation on Induction-System Icing Characteristics.
 MR E5L27 (WR E-173), Jan. 1946.
- Harrison, L. P.: Lightning Discharges to Aircraft and Associated Meteorological Conditions. TN 1001, May 1946.
- Peiser, A. M. and Walker, W. G.: An Analysis of the Airspeeds and Normal Accelerations of Boeing S-307 Airplanes in Commercial Transport Operation. TN 1141, Sept. 1946.
- Peiser, A. M.: An Analysis of the Airspeeds and Normal Accelerations of Douglas DC-3 Airplanes in Commercial Transport Operation. TN 1142, Sept. 1946.
- Parkinson, John B.: Appreciation and Determination of the Hydrodynamic Qualities of Seaplanes. TN 1290, May 1947.
- Talmage, Donald B.: A Time History of Control Operation of a C-54 Airplane in Blind Landing Approaches. RM L7F20, July 1947.
- Coles, Willard D.: Laboratory Investigation of Ice Formation and Eliminating in the Induction System of a Large Twin-Engine Cargo Aircraft. TN 1427, Sept. 1947.
- Steiner, Roy: An Analysis of Airspeeds and Mach Numbers Attained by Lockheed Constellation Airplanes in Transcontinental Operations During the Early Summer of 1946. RM L7C06, Oct. 1947.
- Steiner, Roy: Supplementary Data on Airspeeds and Mach Numbers Attained by Lockheed Constellation Airplanes in Transcontinental Operations. RM L7F25, Oct. 1947.
- Davis, Don D., Jr. and Sweberg, Harold H.: Investigation of Some Factors Affecting Comparisons of Wind-Tunnel and Flight Measurements of Maximum Lift Coefficients for a Fighter-Type Airplane. TN 1639, June 1948.
- Neihouse, Anshal I.: Spin-Tunnel Investigation to Determine the Effectiveness of a Rocket for Spin Recovery. TN 1866, April 1949.
- Höhler, P.: The Influence of the Application of Power During Spin Recovery of Multiengine Airplanes. TM 1219, June 1949.

Physiological

(7.8)

- Gradenwitz, Arthur: Tests of Artificial Flight at High Altitudes. TM 4, Nov. 1920.
- Le Bailly: Factors of Safety and Indexes of Static Tests. TM 206, May 1923.
- King, Paul B. and Carroll, Thomas: High Altitude Flying. TN 193, May 1924.
- Doolittle, J. H.: Accelerations in Flight. Rept. 203, 1925.
- Eliott-Lynn: Suggestions for Popularizing Civil Aviation. MP 14, Jan. 1926.
- Committee on Aircraft Accidents: Aircraft Accidents-Method of Analysis. Rept. 576, 1936.

- Scudder, N. F. and Kirschbaum, H. W.: Further Measurements of Normal Accelerations on Racing Airplanes. TN 556, Feb. 1936.
- Womack, S. H. J. and Peterson, J. B.: Carbon-Monoxide Indicators for Aircraft. TN 573, July 1936.
- High Voltage Laboratory, National Bureau of Standards: Protection of Nonmetallic Aircraft from Lightning. IV - Electrocution Hazards from Inductive Voltages. ARR 4128 (WR W-85), March 1945.
- Webster, A. P.: Free-Falls and Parachute Descent in the Standard Atmosphere. TN 1315, June 1947.

General

(7.9)

- The Opposition of the Entente with Regard to German Competition in Aeronautics. MP 2, Dec. 1920.
- Wronsky, W.: Commercial Aviation in Germany Past and Future. TM 5, Feb. 1921.
- Margoulis, W.: The Gordon Bennett Airplane Cup. TN 50, April 1921.
- Abstracts from the German Technical Press. Rates for Flights Organized by the State. TM 18, April 1921.
- Nobile, Umberto: The Employment of Airships for the Transport of Passengers. Indications on the Maximum Limits of Their Useful Load, Distance Covered, Altitude and Speed. TN 63, Aug. 1921.
- Issued by the Administration of Civil
 Aeronautics of the Ministry National
 Defense: Extracts from the Belgian
 Regulations for Government Assistance
 to Air Transport Companies. TM 50,
 Nov. 1921.
- Leyensetter, Walther: Traffic Airships with Special Reference to Economy. TM 53, Nov. 1921.
- James, P.: Marking Airdromes. TM 62, Feb. 1922.
- Pierrot: Aerial Transportation. TM 64, Feb. 1922.
- Terrisse, M. H.: Airways. Laying Out -Marking - Radio Communications -Meteorological Information - Airdromes - Their Operation. MP 6, March 1922.
- Easter, Ewing: Notes on Landing Places for Seaplanes Along the Atlantic Coast. TM 72, March 1922.
- Carlier, André: Publicity by Airplane. TM 74, March 1922.
- Neal, Erik: Aeronautic Insurance. TM 75, March 1922.
- Tete, Albert: Organization and Exploitation of Regular Aerial Transportation Lines. TM 83, April 1922.
- Porquet: Irresponsibility Clause in Air Traffic Contracts. TM 87, April 1922.

- Sudre, G.: Air Traffic. TM 89, May 1922.
- Ripert, Georges: Proposed Air Traffic Law. TM 90, May 1922.
- Devaluez: Regulation of Air Traffic. TM 91, May 1922.
- Mayo, R. H.: Aviation and Insurance. TM 93, May 1922.
- Warner, Edward P.: Technical Problems of Commercial Flying. TM 95, May 1922.
- Warner, Edward P.: The Choice of Air Routes. TM 96, May 1922.
- Warner, Edward P.: Subsidies for Air Transport. TM 99, May 1922.
- Prepared by Office of Aeronautical Intelligence. The World's Air Transportation Services. TM 108, June 1922.
- Vivent, Jacques: Politics of Aviation Fields. TM 112, July 1922.
- Van Crombrugge, Col. A.: Aviation in the Belgian Congo. TM 113, July 1922.
- Warner, Edward P.: European Air Travel in 1922. TM 114, July 1922.
- Warner, Edward P.: This Summer's Gliding Meets. TM 122, July 1922.
- Miner, Lt. V. S. and Carroll, T.: Laying Out of a Practical Air Route. TM 123, July 1922.
- Warner, Edward P.: Commercial Aircraft in War. TM 126, Aug. 1922.
- Warner, Edward P.: Police Regulation of Aircraft. TM 130, Aug. 1922.
- De Marolles: Utilization Conditions of Different Types of Airplanes. TM 131, Aug. 1922.
- Warner, Edward P.: Report on the General Design of Commercial Aircraft. TN 113, Sept. 1922.
- Nobile, Umberto: The Future of Aerial Transportation in Public Services. MP 12, Sept. 1922.
- Warner, Edward P.: International Aspects of Air Travel. TM 139, Sept. 1922.

- Warner, Edward P .: The Disposal of Military Aircraft. TM 142, Sept. 1922.
- Warner, Edward P.: What Retards Air Transport? TM 143, Sept. 1922.
- Warner, Edward P.: Air Transport Economics. TM 150, Oct. 1922.
- Warner, Edward P.: The Organization of Airways. TM 158, Nov. 1922.
- From "L'Auto," September 29, 1922. Commercial Aviation in France. TM 157, Nov. 1922.
- Warner, Edward P.: Selling Air Transport. TM 159, Nov. 1922.
- Warner, Edward P.: Aeronautical Museums. TM 161, Nov. 1922.
- Black, Archibald: How to Lay Out and Build on Airplane Landing Field. TM 164, Nov. 1922.
- Warner, Edward P.: Depreciation of Aircraft. TM 175, Dec. 1922.
- Published by the "Wissenschaftliche Gesellschaft fur Luftfahrt," (W.G.L.), Berlin, 1922: Rules and Regulations of the 1922 Rhon Soaring Flight Contest. TM 184, Feb. 1923.
- Warner, Edward P.: Seaplanes for Commerce. TM 193, March 1923.
- From "Flugsport," February 21, 1923: Rules and Regulations of the 1923 Rhön Soaring-Flight Contest. TM 207, May
- From "Flugsport," April 18, 1923: Rules and Regulations Governing the Fokker Soaring-Flight Contest over Water or Level Land. TM 210, June 1923.
- Anon: Government Relations with Air Traffic Companies and Owners of Touring Airplanes. TM 228, Sept. 1923.
- Sherz, Walter: Possibility of Profitable Air Traffic Between Lisbon and Rio de Janeiro. TM 236, Nov. 1923.
- Published by the "Societe d'Etudes et d'Informations Economiques": Aero-nautical Record - No. 1 (To June, 1923). Translation of "Chronique Aeronautique." TM 243, Dec. 1923.
- Page, F. Handley: Reprint from "The Journal of the Institute of Transport." Air Transport. TM 244, Jan. 1924.
- Crocco, G. A.: Structural and Economic Limits to the Dimensions of Airships. TM 274, Aug. 1924.

- Crocco, G. A.: Mooring Airships. TM 283, Oct. 1924.
- Bleistein, W.: Effect of Speed on Economy of Airship Traffic. TM 302, Feb. 1925.
- Van Zandt, J. Parker: European Commercial Aeronautics. TM 316, May 1925.
- Van Zandt, J. Parker: Report on Commercial Air Transportation Activities in England, France, Germany, and Holland. TM 319, June 1925.
- Van Zandt, J. Parker: Latécoère Air Lines. TM 327, Aug. 1925.
- Anon: The New Croydon Aerodrome. MP 17, Sept. 1925.
- Van Zandt, J. Parker: Preliminary Report on British Commercial Aeronautics. TM 328, Sept. 1925.
- Prepared by Eliott-Lynn: Suggestions for Popularizing Civil Aviation. MP 14, Jan. 1926.
- Rohrbach, Adolf: Recent Experiments with Large Seaplanes. TM 353, March 1926.
- Von Römer, B.: Prospective Develop-ment of Giant Airplanes. TM 463, May 1928.
- Dowty, G. H.: Wheel Brakes and Their Application to Aircraft. TM 466, May 1928.
- Brunat, Henri: Combating Airplane Fires. TM 550, Jan. 1930.
- Hirth, Wolfram, K. E.; Schempp, Martin H. and Herrick, Jack: Elmira Soaring Contest, 1930. TM 613, March 1931.
- Waldron, C. D.: Pressure Drop in Tank and Float Vent Tubes on Diving Airplanes. ACR (WR E-114), Jan. 1939.
- Harney, L. A.; Saur, J. F. T. Jr., and Robinson, A. R.: A Statistical Study of Wave Conditions at Four Open-Sea Localities in the North Pacific Ocean. TN 1493, Jan. 1949.
- Jones, Alun R. and Lewis, William: Recommended Values of Meteorological Factors to be Considered in the Design of Aircraft Ice-Prevention Equipment. TN 1855, March 1949.
- Lewis, William and Hoecker, Walter H., Jr .: Observations of Icing Conditions Encountered in Flight During 1948. TN 1904, June 1949.

INSTRUMENTS
(8)

Flight

(8.1)

- Herschel, W. H.: Investigation of Pitot Tubes. Part I - The Pitot Tube and Other Anemometers for Airplanes. Buckingham, E.: Part II - The Theory of the Pitot and Venturi Tubes. Rept. 2, 1915.
- General Specifications Covering Requirements of Aeronautic Instruments. Rept. 8, 1916.
- Zahm, A. F.: Development of Air Speed Nozzles. Rept. 31, 1919.
- Zahm, A. F. and Smith, R. H.: Comparison of United States and British Standard Pitot-Static Tubes. Rept. 81, 1920.
- Norton, F. H.: The Efficiency of Small Bearings in Instruments of the Type Used in Aircraft. Rept. 94, 1920.
- Warner, E. P.: Notes on the Theory of the Accelerometer. TN 3, May 1920.
- Norton, F. H.: The Photographic Recording of Small Motions. TN 22, Nov. 1920.
- Norton, F. H. and Allen, E. T.: Accelerations in Flight. Rept. 99, 1921.
- Norton, F. H. and Warner, Edward P.: Accelerometer Design. Rept. 100, 1921.
- Warner, E. P. and Norton, F. H.: Angles of Attack and Air Speeds During Maneuvers. Rept. 105, 1921.
- Hersey, Mayo D.; Hunt, Franklin L. and Eaton, Herbert N.: The Altitude Effect on Air Speed Indicators. Rept. 110, 1921.
- Norton, F. H. and Bacon, D. L.: NACA -Langley Field Wind Tunnel Apparatus. The Tilting Manometer. TN 36, Jan. 1921.
- Constantin, Louis: New Lateral Stabilizing Device for Airplanes. TM 179, Jan. 1921.
- Friedensburg, Walter: Distant-Compass. TM 28, June 1921.
- Enoch, O.: The Dynamometer Hub for Testing Propellers and Engines During Flight. TN 59, July 1921.
- Norton, F. H.: NACA Recording Air Speed Meter. TN 64, Oct. 1921.

- Proll, A.: Pressure Measurements During Flight. TM 58, Nov. 1921.
- Hersey, Mayo D.: Aeronautic Instruments -Section I. General Classification of Instruments and Problems Including Bibliography. Rept. 125, 1922.
- Aeronautic Instruments Section, National Bureau of Standards: Aeronautic Instruments - Section II. Altitude Instruments. Rept. 126, 1922.
- Hunt, F. L. and Stearns, H. O.: Aeronautic Instruments - Section III. Aircraft Speed Instruments. Rept. 127, 1922.
- Aeronautic Instruments Section, National Bureau of Standards: Aeronautic Instruments - Section IV. Direction Instruments. Rept. 128, 1922.
- Hunt, F. L.: Oxygen Instruments. Rept. 130, 1922.
- Eaton, H. N.: Aeronautic Instruments -Section VII. Aerial Navigation and Navigating Instruments. Rept. 131, 1922.
- Hunt, F. L.: Aeronautic Instruments. Section VIII. Recent Developments and Outstanding Problems. Rept. 132, 1922.
- Norton, F. H. and Brown, W. G.: The Pressure Distribution over the Horizontal Tail Surfaces of an Airplane, III. Rept. 148, 1922.
- Reid, H. J. E.: A Study of Airplane Maneuvers with Special Reference to Angular Velocities. Rept. 155, 1922.
- Eaton, H. N. and MacNair, W. A.: The Altitude Effect on Air Speed Indicators II. Rept. 156, 1922.
- Wieselsberger, C.: Manometer for Recording Air Speed. TM 66, Feb. 1922.
- Eaton, H. N. and Keulegan, G. H.: Sylphon Diaphragms. A Method for Predicting Their Performance for Purposes of Instrument Design. TN 90, May 1922.
- Norton, F. H.: NACA Control Position Recorder. TN 97, May 1922.
- Warner, Edward P.: Mechanical Aids to Flight. TM 98, May 1922.

- Anon.: Description of the Klemperer Wing Strain Meter (Accelerometer). TM 125, Aug. 1922.
- De Guiche, A. de Gramont: Turn Indicator. TM 128, Aug. 1922.
- Cabral, Sacadura: Coutinho-Sacadura Course Corrector. TM 132, Aug. 1922.
- Constantin, M. Louis: Wind Vane with Various Applications. TM 137, Sept. 1922.
- Reid, H. J. E.: The NACA Three-Component Accelerometer. TN 112, Oct. 1922.
- Brown, W. G.: The Synchronization of NACA Flight Records. TN 117, Oct. 1922.
- Leroy, Mr.: Effect of Temperature and Pressure on Watches and Chronometers. TM 170, Nov. 1922.
- Weaver, E. R. and Pickering, S. F.: An Airship Slide Rule. Rept. 160, 1923.
- Hersey, M. D.: Diaphragms for Aeronautic Instruments. Rept. 165, 1923.
- Warner, John A. C.: An Optical Altitude Indicator for Night Landing. TN 123, Jan. 1923.
- Taken from London Times, April 5, 1923.

 Aerial Photography Obtaining a True
 Perspective. TM 200, April 1923.
- Bennewitz, Kurt: Aeronautical Instruments. TN 145, June 1923.
- Warner, Edward P.: Control Operating Mechanisms for Airplanes. TM 217, July 1923.
- Heidelberg, V. and Hölzel, A.: Speed Measurements Made by Division "A" of the Airplane Directorate (Flugzeugmeisterei), Subdivision for Flight Experiments. TN 147, July 1923.
- Reid, H. J. E.: Notes on the NACA Control Force Recorder. TN 150, July 1923.
- Ronan, K. M.: An Instrument for Recording the Position of Airplane Control Surfaces. TN 154, Aug. 1923.
- Reid, H. J. E.: The NACA Recording Tachometer and Angle of Attack Recorder. TN 156, Aug. 1923.
- Laboccetta, Letterio: The Vertical Accelerometer, a New Instrument for Air Navigation. TM 232, Oct. 1923.
- Beij, Hilding: Astronomical Methods in Aerial Navigation. Rept. 198, 1924.

- Everling, E. and Koppe, H.: Aeronautic Instruments. TM 249, Feb. 1924.
- Zahm, A. F.: The Vector Ruling Protractor. TM 251, March 1924.
- Robrovsky, T.: Device for Measuring Sound in Airplane Engines. TM 266, June 1924.
- Stieber, W.: Stieber Dynamometer Hub for Aircraft Propellers. TM 288, Nov. 1924.
- Reid, Elliott G.: Interference Tests on an NACA Pitot Tube. Rept. 199, 1925.
- Eaton, H. N. and Buckingham, C. T.: Nonmetallic Diaphragms for Instruments. Rept. 206, 1925.
- Crowley, J. W., Jr. and Freeman, R. G.: Determination of Turning Characteristics of an Airship by Means of a Camera Obscura. Rept. 208, 1925.
- Kumbruch, H.: Pitot-Static Tubes for Determining the Velocity of Air. TM 303, Feb. 1925.
- Praetorius, K. R. H.: The Problem of Fuel Measurement (the Schiske "Konsummeter"). TM 315, May 1925.
- Le Prieur, Ives: The "Navigraph". TM 320, June 1925.
- Freeman, R. G.: Air Flow Investigation for Location of Angle of Attack Head on a JN4h Airplane. TN 222, Aug. 1925.
- Altimeter Calibration Standard Adopted by the NACA, and Approved by the War and Navy Depts., the Weather Bureau and the Bureau of Standards. MP 16, Sept. 1925.
- Reid, H. J. E. and Kirchner, Otto E.: An Altitude Chamber for the Study and Calibration of Aeronautical Instruments. TN 229, Nov. 1925.
- Munk, Max M.: The Spacing of Orifices for the Measurement of Pressure Distribution. TN 230, Jan. 1926.
- Von Baumhauer, A. G.: Photographic Time Studies of Airplane Paths. TM 345, Jan. 1926.
- Anon.: Behm Acoustic Sounder for Aircraft. TM 346, Jan. 1926.
- Koppe, Heinrich: Flight Tests on Airplanes. TM 359, April 1926.
- Coleman, Donald G.: NACA Flight-Path-Angle and Air-Speed Recorder. TN 233, April 1926.

- Hemke, Paul E.: Influence of the Orifice on Measured Pressures. TN 250, Nov. 1926.
- Carroll, T. and Mixson, R. E.: The Effect of Tube Length upon the Recorded Pressures from a Pair of Static Orifices in a Wing Panel. TN 251, Nov. 1926.
- Mazer, Paul: Devices for Prevention of Stalled Flight. TM 389, Nov. 1926.
- Bear, R. M.: Differential Pressures on a Pitot-Venturi and a Pitot-Static Nozzle over 360° Pitch and Yaw. Rept. 264, 1927.
- Hemke, Paul E.: The Measurement of Pressure Through Tubes in Pressure Distribution Tests. Rept. 270, 1927.
- Schoeffel, M. F.: The Installation and Correction of Compasses in Airplanes. TN 262, Aug. 1927.
- Crowley, J. W., Jr. and Mixson, R. E.: Characteristics of Five Propellers in Flight. Rept. 292, 1928.
- Carroll, Thomas and McAvoy, William H.: The Variation in Pressures in the Cockpit of an Airplane in Flight. TN 300, Nov. 1928.
- Keulegan, G. H.: Investigation of Damping Liquids for Aircraft Instruments. Rept. 299, 1929.
- Brombacher, W. G. and Cordero, F.: Pressure Element of Constant Logarithmic Stiffness for Temperature Compensated Altimeter. Rept. 310, 1929.
- Thompson, F. L.: Water Pressure Distribution on a Twin-Float Seaplane. Rept. 328, 1929.
- Gradenwitz, Alfred: Device for the Automatic Control of Airplanes. TM 495, Jan. 1929.
- Spieweck, Bruno: Photogrammetric Take-Off and Landing Measurements. TM 496, Jan. 1929.
- Seewald, F.: Force Measurements on Airplanes. TM 519, June 1929.
- The Automatic Aircraft Pilot Circular issued by the Boykow Instrument Co. MP 23, Aug. 1929.
- Dearborn, C. H. and Kirschbaum, H. W.: Maneuverability Investigation of the F6C-3 Airplane with Special Flight Instruments. Rept. 369, 1930.
- By Subcommittee on Instruments: Present Status of Aircraft Instruments. Rept. 371, 1930.

- Schreiber, Ernest: The Behm Acoustic Sounder for Airplanes with Reference to Its Accuracy. TM 588, Oct. 1930.
- Theodorsen, Theodore: Investigation of the Diaphragm-Type Pressure Cell. Rept. 388, 1931.
- Houseman, M. R. and Keulegan, G. H.: Investigation of Damping Liquids for Aircraft Instruments II. Rept. 398, 1931.
- Peck, W. C. and Beard, A. P.: Drop and Flight Tests on NY-2 Landing Gears Including Measurements of Vertical Velocities at Landing. Rept. 406, 1931.
- Gough, Melvin N.: The Variation in Pressure in the Cabin of an Airplane in Flight. TN 368, March 1931.
- Küssner, Hans Georg: Optico-Photographic Measurements of Airplane Deformations. TM 610, March 1931.
- Peters, H.: Effect of Viscosity in Speed Measurements with Double-Throat Venturi Tubes. TM 633, Aug. 1931.
- Strother, D. H. and Henrickson, H. B.: Effect of Aging on Taut Rubber Diaphragms. TN 409, Feb. 1932.
- Krisam, Dr. F.: Speed and Pressure Recording in Three-Dimensional Flow. TM 688, Oct. 1932.
- Magnan, A.: Methods of Recording Rapid Wind Changes. TM 692, Nov. 1932.
- Möller, W.: Development of the Telecompass and Its Use in the Automatic Control of Airplanes. MP 35, Dec. 1932.
- Brevoort, M. J.: Landing-Shock Recorder. TN 501, July 1934.
- Brombacher, W. G.: Measurement of Altitude in Blind Flying. TN 503, Aug. 1934.
- Brombacher, W. G.: Altitude Pressure Tables for Calibrating Altimeters and Computing Altitudes Based on the United States Standard Atmosphere. Rept. 538, 1935.
- Kiel, G.: Total-Head Meter with Small Sensitivity to Yaw. TM 775, Aug. 1935.
- Merriam, Kenneth G. and Spaulding, Ellis R.: Comparative Tests of Pitot-Static Tubes. TN 546, Nov. 1935.
- Peterson, John B. and Smith, Clyde W.: Aircraft Compass Characteristics. Rept. 551, 1936.

- Parsons, John F.: Full-Scale Wind-Tunnel Tests to Determine a Satisfactory Location for a Service Pitot-Static Tube on a Low-Wing Monoplane. TN 561, March 1936.
- Thompson, F. L.: Procedure for Determining Speed and Climbing Performance of Airships. TN 564, April 1936.
- Womack, S. H. J. and Peterson, J. B.: Carbon-Monoxide Indicators for Aircraft. TN 573, July 1936.
- Haus, Fr.: Automatic Stabilization. TM 815, Dec. 1936.
- Peterson, John B. and Womack, S. H. J.: Electrical Thermometers for Aircraft. Rept. 606, 1937.
- Wildhack, W. A.: Pressure Drop in Tubing in Aircraft Instrument Installations. TN 593, Feb. 1937.
- Koning, C. and DeHaas, T. P.: The Critical Velocity of a Body Towed by a Cable from an Airplane. TM 832, July 1937.
- Draper, C. S.: The Sonic Altimeter for Aircraft. TN 611, Aug. 1937.
- Thompson, F. L.: The Measurement of Air Speed of Airplanes. TN 616, Oct. 1937.
- Sontag, Harcourt and Johnson, Daniel P.: Performance Characteristics of Venturi Tubes Used in Aircraft for Operating Air-Driven Gyroscopic Instruments. TN 624, Nov. 1937.
- Danielzig, Helmut: Rate-of-Climb Recorder. TM 849, Feb. 1938.
- Danielzig, Helmut: Behavior of Static Pressure Heads at High Speeds. TM 865, June 1938.
- Brombacher, W. G. and Trent, W. C.: Gyroscopic Instruments for Instrument Flying. TN 662, Sept. 1938.
- Thompson, F. L.: NACA Stall-Warning Indicator. TN 670, Oct. 1938.
- Johnson, Daniel P.: Aircraft Rate-of-Climb Indicators. Rept. 666, 1939.
- Tozier, Robert E.: An Electrical-Type Indicating Fuel Flowmeter. ACR, Sept. 1939.
- Kiel, Georg: Measurement of the True Dynamic and Static Pressures in Flight. TM 913, Oct. 1939.
- Wildhack, W. A. and Goerke, V. H.: Corrugated Metal Diaphragms for Aircraft Pressure-Measuring Instruments. TN 738, Nov. 1939.

- Walchner, O.: The Effect of Compressibility on the Pressure Reading of a Prandtl Pitot Tube at Subsonic Flow Velocity. TM 917, Nov. 1939.
- De Forest, A. V. and Leaderman, H.: The Development of Electrical Strain Gages. TN 744, Jan. 1940.
- London, Albert: Principles, Practice, and Progress of Noise Reduction in Airplanes. TN 748, Jan. 1940.
- Anon.: Standards for Discharge Measurement with Standardized Nozzles and Orifices. German Industrial Standard 1952. TM 952, Sept. 1940.
- Puschmann, Traute: Materials for Slack Diaphragms. TM 964, Dec. 1940.
- Beij, K. Hilding: Aircraft Speed Instruments. Rept. 420, 1941.
- Sontag, Harcourt and Brombacher, W. G.:
 Aircraft Power-Plant Instruments.
 Rept. 466, 1941.
- Eckert, B.: Experiences with Flow-Direction Instruments. TM 969, March 1941.
- Rhode, Richard V.: Some Effects of Rainfall on Flight of Airplanes and on Instrument Indications. TN 803, April 1941.
- Becker, J. A.: Protection Against Acoustical Shock in Radio Earphones. MP 46, June 1941.
- Eckert, E.: Temperature Recording in High-Speed Gases. TM 983, Aug. 1941.
- Peterson, John B.: Damping Characteristics of Dashpots. TN 830, Oct. 1941.
- Weidermann, Hans: Inertia of Dynamic Pressure Arrays. TM 998, Dec. 1941.
- Hootman, James A.: A Method for the Dynamic Calibration of Accelerometers. MP 47, March 1942.
- Meier, Adolf: Recording Rapidly Changing Cylinder-Wall Temperatures. TM 1013, May 1942.
- Hensley, Reece V.: Calibrations of Pitot-Static Tubes at High Speeds. ACR (WR L-396), July 1942.
- Jones, Alun R. and Zalovcik, John A.:
 Flight Investigation of a Stall-Warning
 Indicator for Operation Under Icing
 Conditions. RB (WR L-503), July 1942.
- Golden, Jacob: The Effect of Large Angles of Yaw on the Accuracy of Wing-Tip Yawmeters. RB, Sept. 1942.

- Thompson, F. L. and Zalovcik, John A.: Airspeed Measurements in Flight at High Speeds. ARR, Oct. 1942.
- Gilruth, R. R.; Zalovcik, J. A. and Jones, A. R.: Flight Investigation of an NACA Ice-Detector Suitable for Use as a Rate-of-Icing Indicator. ARR (WR L-364), Nov. 1942.
- Klemperer, W. B.: A Rosette Strain Computer. TN 875, Dec. 1942.
- Gerrish, Harold C. and Meem, J. Lawrence, Jr.: The Measurement of Fuel-Air Ratio by Analysis of the Oxidized Exhaust Gas. Rept. 757, 1943.
- Wetmore, J. W.: NACA Apparatus and Methods for Take-Off and Landing Measurements. CB, Jan. 1943.
- Lebenbaum, Paul Jr.: Altitude Rating of Electric Apparatus. ARR (WR W-40), Jan. 1943.
- Weske, John R.: Methods of Measurement of High Air Velocities by the Hot-Wire Method. TN 880, Feb. 1943.
- Weske, John R.: A Hot-Wire Circuit with Very Small Time Lag. TN 881, Feb. 1943.
- Mc Pherson, Albert E.: A Portable Calibrator for Dynamic Strain Gages. TN 887, Feb. 1943.
- Cook, Harvey A. and Olson, Walter T.: Small-Orifice Tubes for Minimizing Dilution in Exhaust-Gas Samples. ARR (WR E-137), Feb. 1943.
- Baals, Donald D. and Ritchie, Virgil S.: A Simplified Chart for Determining Mach Number and True Airspeed from Airspeed-Indicator Readings. RB (WR L-473), March 1943.
- Bemis, John R. and Houghton, Henry G., Jr.: An Instrument for the Determination of Rain Densities in Flight. ARR 3E18 (WR W-42), May 1943.
- Johnson, Harold I.: NACA Procedure for Flight Tests of Aileron Characteristics of Airplanes. RB 3G24 (WR L-265), July 1943.
- Scherrer, Richard and Rodert, Lewis A.: A Flight Investigation of Fuselage Static-Pressure-Vent Airspeed Installations. ARR 3K16 (WR A-64), Nov. 1943.
- Edwards, Howard B.: Wire-Strain-Gage Hinge-Moment Indicators for Use in Tests of Airplane Models. CB L4D15, April 1944.

- Tolefson, H. B.: XC-35 Gust Research Project Bulletin No. 9. Flight Measurement of Liquid-Water Content of Clouds and Precipitation Regions. RB L4E17, May 1944.
- Voglewede, T. J.: A Proposed Method of Measuring Engine Charge Air Flow in Flight. CB L4E25 (WR L-200), May 1944.
- Lindsey, W. F.: Effect of Mach Number on Position Error as Applied to a Pitot-Static Tube Located 0.55 Chord Ahead of an Airplane Wing. CB L4E29 (WR L-75), May 1944.
- Manson, S. S.: Charts for Rapid Analysis of 45° Strain-Rosette Data. TN 940, May 1944.
- Manson, S. S.: An Automatic Electrical Analyzer for 45° Strain-Rosette Data. TN 941, May 1944.
- Liebe, Welfgang: DVL Angular Velocity Recorder. TM 1065, Aug. 1944.
- Zalovcik, John A. and Daum, Fred L.:
 Flight Investigation at High Mach
 Numbers of Several Methods of Measuring Static Pressure on an Airplane
 Wing. RB L4H10a (WR L-90), Nov.
 1944.
- By Stability and Control Section of Flight Research Division: Charts Showing Stability and Control Characteristics of Airplanes in Flight. MR L4L26 (WR L-706), Dec. 1944.
- Draper, C. S.; Taylor, E. S.; Lancor, J. H. and Coffey, R. T.: Development of a Detonation Detector Suitable for Use in Flight. TN 977, Dec. 1944.
- Nettles, J. Cary and Hanson, Morgan P.: Flight Tests of a P-63A-1 Airplane with an Electric Torquemeter. ARR E5B16 (WRE-64), March 1945.
- Gnam, E.: A New Apparatus for Measuring the Temperature at Machine Parts Rotating at High Speeds. TM 1080, April 1945.
- Turner, Howard L. and Rathert, George A., Jr.: Pressure Lag in Tubing Used in Flight Research. RB 5F15, July 1945.
- Newell, Joseph S.: A Preliminary Survey of Existing Information Pertaining to Dynamic Loads in Aircraft Structures. CB 5H03, Aug. 1945.
- Warfield, Calvin N. and Kenimer, Robert L.: An Infrared Cloud Indicator. I Analysis of Infrared-Radiation Exchange with Tables and Chart for Calibration of the Cloud Indicator. ACR L5104 (WR L-18), Nov. 1945.

- Cohen, Doris: Analytical Investigation of the Stability of an F8F Dropping Model with Automatic Stabilization - TED No. NAM 2466. MR L5L03 (WRL-780), Dec. 1945.
- Clousing, Lawrence A.; Turner, William N. and Rolls, L. Stewart: Measurements in Flight of the Pressure Distribution on the Right Wing of a P-39N-1 Airplane at Several Values of Mach Number. Rept. 859, 1946.
- Lindsey, W. F.: Calibrations of Service Pitot Tubes in the Langley 24-Inch High Speed Tunnel. MR L6A08 (WR L-580), Feb. 1946.
- Pearson, Henry A. and Beadle, Dorothy E.: Flight Measurements by Various Methods of the Drag Characteristics of the XP-51 Airplane. MR L6F12 (WRL-741), June 1946.
- Campbell, William R.: Performance Tests of Wire Strain Gages. IV - Axial and Transverse Sensitivities. TN 1042, June 1946.
- Tolefson, H. B. and Pratt, K. G.: An Analysis of the Indications of the University of Chicago Airborne Turbulence Indicator in Gusty Air. MR L6G08 (WR L-723), Aug. 1946.
- Del Turco, Rosello Roselli: The Effect on the Sperry Directional Gyro in Turning. TM 1091, Aug. 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- Mathews, Charles W. and Kleckner, Harold F.: Theoretical Analysis and Bench Tests of a Control-Surface Booster Employing a Variable Displacement Hydraulic Pump. RM L6H30, Jan. 1947.
- Friswold, Frank A.; Lewis, Ralph D. and Wheeler, R. Clyde, Jr.: An Improved Continuous-Indicating Dew-Point Meter. TN 1215, Feb. 1947.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr.; Scadron, Marvin D. and Colmar, Anthony: The NACA Mixture Analyzer and Its Application to Mixture-Distribution Measurement in Flight. TN 1238, March 1947.

- Kühl, H.: Fundamentals of the Control of Gas-Turbine Power Plants for Aircraft. Part III - Control of Jet Engines. TM 1166, May 1947.
- Letko, William: Investigation of the Fuselage Interference on a Pitot-Static Tube Extending Forward from the Nose of the Fuselage. TN 1496, Dec. 1947.
- Valerino, Michael F. and Kaufman, Samuel J.: Cylinder-Temperature and Cooling-Air-Pressure Instrumentation for Air-Cooled-Engine Cooling Investigations. TN 1509, Jan. 1948.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.
- Johnson, Daniel P.: Calibration of Altimeters Under Pressure Conditions Simulating Dives and Climbs. TN 1562, March 1948.
- Huston, Wilber B.: Accuracy of Airspeed Measurements and Flight Calibration Procedures. TN 1605, June 1948.
- Hammack, Jerome B.: Flight Investigation in Climb and at High Speed of a Two-Blade and a Three-Blade Propeller.
 TN 1784, Jan. 1949.
- Phillips, William H.: Theoretical Analysis of Oscillations of a Towed Cable. TN 1796, Jan. 1949.
- Taback, Israel: The Response of Pressure Measuring Systems to Oscillating Pressures. TN 1819, Feb. 1949.
- Goldstein, David L. and Scherrer, Richard: Design and Calibration of a Total-Temperature Probe for Use at Supersonic Speeds. TN 1885, May 1949.
- Perkins, Porter J. and Millenson, Morton B.: An Electric Thrust Meter Suitable for Flight Investigation of Propellers. RM E9C17, May 1949.
- Gracey, William: Position Errors of the Service Airspeed Installations of 10 Airplanes. TN 1892, June 1949.
- Höhler, P. and von Koppen, I.: Experimental Flights for Testing of a Reactor as an Expedient for the Termination of Dangerous Spins. TM 1221, July 1949.

Laboratory

(8.2)

- Herschel, W. H.: Investigation of Pitot Tubes. Part I - The Pitot Tube and Other Anemometers for Airplanes. Buckingham, E.: Part II - The Theory of the Pitot and Venturi Tubes. Rept. 2, 1915.
- Marchis, L.: Experimental Researches on the Resistance of Air. Rept. 12, 1916.
- Larson, L. J.: The Airplane Tensiometer. Rept. 32, 1920.
- Norton, F. H.: The Efficiency of Small Bearings in Instruments of the Type Used in Aircraft. Rept. 94, 1920.
- Warner, E. P.: Notes on the Theory of the Accelerometer. TN 3, May 1920.
- Stieber, W.: The Dynamometer Hub. TN 18, Sept. 1920.
- Norton, F. H.: The Photographic Recording of Small Motions. TN 22, Nov. 1920.
- Sparrow, S. W.: Instrument for Measuring Engine Clearance Volumes. TN 27, Dec. 1920.
- Dickinson, H. C. and Newell, F. B.: A High-Speed Engine Pressure Indicator of the Balanced Diaphragm Type. Rept. 107, 1921.
- Norton, F. H. and Bacon, D. L.: The Optical Wing Aligning Device of the Langley Field Tunnel. TN 35, Jan. 1921.
- Norton, F. H. and Bacon, D. L.: NACA Langley Field Wind Tunnel Apparatus. The Tilting Manometer. TN 36, Jan. 1921.
- Bacon, D. L.: Langley Field Wind Tunnel Apparatus. TN 65, Oct. 1921.
- Warburg, E. and Heuse, W.: Aneroid Investigations in Germany. TN 72, Oct. 1921.
- Norton, F. H.: A Mechanical Device for Illustrating Airplane Stability. TN 76, Dec. 1921.
- Hersey, Mayo D.: Aeronautic Instruments - Section I. General Classification of Instruments and Problems Including Bibliography. Rept. 125, 1922.

- By Aeronautic Instruments Section, National Bureau of Standards: Aeronautic Instruments Section II. Altitude Instruments. Rept. 126, 1922.
- Hunt, F. L.: Oxygen Instruments. Rept. 130, 1922.
- Hunt, F. L.: Aeronautic Instruments. Section VIII - Recent Developments and Outstanding Problems. Rept. 132, 1922.
- Bacon, D. L.: Langley Field Wind Tunnel Apparatus. I - Regulators for Speed of Wind Tunnel Drive Motor. II - A Vernier Manometer with Adjustable Sensitivity. TN 81, Jan. 1922.
- Lagarde, C. Martinot: Vibrations of Aviation Engines. TM 56, Jan. 1922.
- Eaton, H. N. and Keulegan, G. H.: Sylphon Diaphragms. A Method for Predicting Their Performance for Purposes of Instrument Design. TN 90, May 1922.
- Norton, F. H.: NACA Control Position Recorder. TN 97, May 1922.
- Description of the Klemperer Wing Strain Meter (Accelerometer). TM 125, Aug. 1922.
- Capetti, Antonio: New Equipment for Testing Light Engines in the Aeronautical Laboratory of the Royal Polytechnic Institute, Turin. MP 9, Sept. 1922.
- Leroy, Mr.: Effect of Temperature and Pressure on Watches and Chronometers. TM 170, Nov. 1922.
- Weaver, E. R. and Pickering, S. F.: An Airship Slide Rule. Rept. 160, 1923.
- Hersey, M. D.: Diaphragms for Aeronautic Instruments. Rept. 165, 1923.
- Zahm, A. F.: The Aerodynamic Plane Table. Rept. 166, 1923.
- Stevens, F. W.: A Constant Pressure Bomb. Rept. 176, 1923.
- Reid, H. J. E.: The NACA Recording Tachometer and Angle of Attack Recorder. TN 156, Aug. 1923.

- Joachim, W. F.: An Impulse Electric Motor for Driving Recording Instruments. TN 157, Sept. 1923.
- Ford, James B.: The Nichols Wing Cutting Equipment. TN 172, Dec. 1923.
- Zahm, A. F.: The Vector Ruling Protractor. TM 251, March 1924.
- Dufour, A .: The Cathode Oscillograph for the Study of Low, Medium and High Frequencies. TM 255, April 1924.
- Elsasser, R.: Measuring Vibration and Torque with the Oscillograph. TM 291, Dec. 1924.
- Reid, Elliott G.: Interference Tests on an NACA Pitot Tube. Rept. 199, 1925.
- Eaton, H. N. and Buckingham, C. T.: Nonmetallic Diaphragms for Instruments. Rept. 206, 1925.
- Kumbruch, H.: Pitot-Static Tubes for Determining the Velocity of Air. TM 303, Feb. 1925.
- Praetorius, K. R. H.: The Problem of Fuel Measurement (The Schiske "Konsummeter"). TM 315, May 1925.
- Munk, Max M.: The Spacing of Orifices for the Measurement of Pressure Distribution. TN 230, Jan. 1926.
- Hemke, Paul E .: Influence of the Orifice on Measured Pressures. TN 250, Nov. 1926.
- Carroll, T. and Mixson, R. E.: The Effect of Tube Length upon the Recorded Pressures from a Pair of Static Orifices in a Wing Panel. TN 251, Nov. 1926.
- Hemke, Paul E .: The Measurement of Pressure Through Tubes in Pressure Distribution Tests. Rept. 270, 1927.
- Green, M. W.: Measurement of the Moments of Inertia of Full Scale Airplanes. TN 265, Sept. 1927.
- Hicks, Chester W.: The Measurement of Maximum Cylinder Pressures. Rept. 294, 1928.
- Zahm, A. F.: An Automatic Speed Control for Wind Tunnels. TN 278, Feb. 1928.
- Keulegan, G. H.: Investigation of Damping Liquids for Aircraft Instruments. Rept. 299, 1929.
- Dryden, H. L. and Kuethe, A. M.: The Measurement of Fluctuations of Air Speed by the Hot-Wire Anemometer. Rept. 320, 1929.

- Thompson, F. L.: Water Pressure Distribution on a Twin-Float Seaplane. Rept. 328, 1929.
- Dryden, H. L. and Kuethe, A. M.: Effect of Turbulence in Wind Tunnel Measurements. Rept. 342, 1930.
- Collins, John H., Jr.: Alterations and Tests of the "Farnboro" Engine Indicator. TN 348, Sept. 1930.
- Miller, M. P.: An Accurate Method of Measuring the Moments of Inertia of Airplanes. TN 351, Oct. 1930.
- Spanogle, J. A. and Collins, John H., Jr.: A Balanced Diaphragm Type of Maximum Cylinder Pressure Indicator. TN 359, Dec. 1930.
- Dryden, Hugh L.: Reduction of Turbulence in Wind Tunnels. Rept. 392, 1931.
- Theodorsen, Theodore: A New Principle of Sound Frequency Analysis. Rept. 395, 1931.
- Noyes, Richard W.: An Integrating Manometer for Use in Wind Tunnel Pressure Distribution Measurements. TN 377, May 1931.
- Taylor, C. Fayette: A Suggested Method for Measuring Turbulence. TN 380, June 1931.
- From Flug, Nos. 7 and 8, July-August, 1931: Dynamic Wind-Tunnel Control. MP 30, Oct. 1931.
- Freeman, Hugh B.: Pressure-Distribution Measurements on the Hull and Fins of a 1/40-Scale Model of the U.S. Airship "Akron." Rept. 443, 1932.
- Mock, W. C., Jr. and Dryden, H. L.: Improved Apparatus for the Measurement of Fluctuations of Air Speed in Turbulent Flow. Rept. 448, 1932.
- Strother, D. H. and Henrickson, H. B.: Effect of Aging on Taut Rubber Diaphragms. TN 409, Feb. 1932.
- Krisam, Dr. F.: Speed and Pressure Recording in Three-Dimensional Flow. TM 688, Oct. 1932.
- Magnan, A.: Methods of Recording Rapid Wind Changes. TM 692, Nov. 1932.
- Spanogle, J. A. and Buckley, E. C.: The NACA Combustion Chamber Gas-Sampling Valve and Some Preliminary Test Results. TN 454, March 1933.
- Wieselsberger, C.: The Aachen Wind-Tunnel Balance. TM 757, Nov. 1934.

- Gough, Melvin N.: The Measurement of the Field of View from Airplane Cockpits. Rept. 514, 1935.
- Sontag, Harcourt and Borlick, E. L.: Method of Testing Oxygen Regulators. TN 532, June 1935.
- Brevoort, Maurice J.: Smoke Generator for Purpose of Making Air Flow Visible. MP 43, April 1937.
- Koning, C. and DeHaas, T. P.: The Critical Velocity of a Body Towed by Cable from an Airplane. TM 832, July 1937.
- Stowell, E. Z.: A Sound Pressure-Level Meter Without Amplification. TN 629, Dec. 1937.
- Tozier, Robert E.: The NACA Optical Engine Indicator. TN 634, Jan. 1938.
- Fenzig, F.: Temperature-Indicating Paints. TM 905, Aug. 1939.
- Tozier, Robert E.: An Electrical-Type Indicating Fuel Flowmeter. ACR, Sept. 1939.
- Kline, Gordon M. and Schiefer, Herbert F.: An Instrument for Estimating Tautness of Doped Fabrics on Aircraft. TN 729, Sept. 1939.
- De Forest, A. V. and Leaderman, H.: The Development of Electrical Strain Gages. TN 744, Jan. 1940.
- London, Albert: Principles, Practice, and Progress of Noise Reduction in Airplanes. TN 748, Jan. 1940.
- Müller, W.: New Equipment for Testing the Fatigue Strength of Riveted and Welded Joints. TM 947, July 1940.
- Anon.: Standards for Discharge Measurement with Standardized Nozzles and Orifices. German Industrial Standard 1952. TM 952, Sept. 1940.
- Puschmann, Traute: Materials for Slack Diaphragms. TM 964, Dec. 1940.
- Aitchison, C. S.: Extension of Pack Method for Compressive Tests. TN 789, Dec. 1940.
- Sontag, Harcourt and Brombacher, W. G.: Aircraft Power-Plant Instruments. Rept. 466, 1941.
- Dutee, Francis J.: An Apparatus for Measuring Rates of Discharge of a Fuel-Injection System. Rept. 714, 1941.
- Eckert, B.: Experiences with Flow-Direction Instruments. TM 969, March 1941.

- Stoller, Morton J. and Ribner, Herbert S.: A Remote Indicating Hinge-Moment Balance. ACR, Aug. 1941.
- Eckert, E.: Temperature Recording in High-Speed Gases. TM 983, Aug. 1941.
- Peterson, John B.: Damping Characteristics of Dashpots. TN 830, Oct. 1941.
- Ferrari, Carlo: Electrical Equipment for the Experimental Study of the Dynamics of Fluids. TM 1006, March 1942.
- Lindsey, W. F.: Calibration of Three Temperature Probes and a Pressure Probe at High Speeds. ARR (WR L-273), April 1942.
- Meier, Adolf: Recording Rapidly Changing Cylinder-Wall Temperatures. TM 1013, May 1942.
- Klemperer, W. B.: A Rosette Strain Computer. TN 875, Dec. 1942.
- Martinelli, R. C.; Morrin, E. H. and Boelter, L. M. K.: An Investigation of Aircraft Heaters. V - Theory and Use of Heat Meters for the Measurements of Rate of Heat Transfer Which are Independent of Time. ARR (WR W-11), Dec. 1942.
- Sanders, J. C.; Wilsted, H. D. and Mulcahy, B. A.: Operating Temperatures of a Sodium-Cooled Exhaust Valve as Measured by a Thermocouple. Rept. 754, 1943.
- Gerrish, Harold C. and Meem, J. Lawrence, Jr.: The Measurement of Fuel-Air Ratio by Analysis of the Oxidized Exhaust Gas. Rept. 757, 1943.
- Hastings, Charles E.: NACA Radio Ground-Speed System for Aircraft. ACR (WR L-477), Feb. 1943.
- Cook, Harvey A. and Olson, Walter T.: Small-Orifice Tubes for Minimizing Dilution in Exhaust-Gas Samples. ARR (WR E-137), Feb. 1943.
- Corson, Blake W., Jr.: The Belt Method for Measuring Pressure Distribution. RB (WR L-244), Feb. 1943.
- Gohlke, Werner: Piezoelectric Instruments of High Natural Frequency Vibration Characteristics and Protection Against Interference by Mass Forces. TM 1040, Feb. 1943.
- Weske, John R.: Methods of Measurement of High Air Velocities by the Hot-Wire Method. TN 880, Feb. 1943.

555

- Weske, John R.: A Hot-Wire Circuit with Very Small Time Lag. TN 881, Feb. 1943.
- Mc Pherson, Albert E.: A Portable Calibrator for Dynamic Strain Gages. TN 887, Feb. 1943.
- Baals, Donald D. and Ritchie, Virgil S.: A Simplified Chart for Determining Mach Number and True Airspeed from Airspeed-Indicator Readings. RB (WR L-473), March 1943.
- Mc Pherson, A. E.: Adaptor for Measuring Principal Strains with Tuckerman Strain Gage. TN 898, June 1943.
- Nielsen, Jack N.: Effect of Turbulence on Air-Flow Measurements Behind Orifice Plates. ARR 3G30 (WR L-274), July 1943.
- Smith, Norman F.: NACA Mach Number Indicator for Use in High-Speed Tunnels. ACR 3G31 (WR L-423), July 1943.
- Nettles, J. Cary and Tucker, Maurice: Construction of Wire Strain Gages for Engine Application. ARR 3L03 (WR E-122), Dec. 1943.
- Moore, Charles S.; Biermann, Arnold E. and Voss, Fred: The NACA Balanced -Diaphraghm Dynamometer - Torque Indicator. RB 4C28 (WR E-139), March 1944.
- Edwards, Howard B.: Wire-Strain-Gage Hinge-Moment Indicators for Use in Tests of Airplane Models. CB L4D15, April 1944.
- Lindsey, W. F.: Effect of Mach Number on Position Error as Applied to a Pitot-Static Tube Located 0.55 Chord Ahead of an Airplane Wing. CB L4E29 (WR L-75), May 1944.
- Manson, S. S.: Charts for Rapid Analysis of 45° Strain-Rosette Data. TN 940, May 1944.
- Manson, S. S.: An Automatic Electrical Analyzer for 45° Strain-Rosette Data. TN 941, May 1944.
- Goodman, Jerry: NACA Mach Number Warning Device for Use in Flight. ACR L4G31 (WR L-203), July 1944.
- Krebs, Richard P.: An Electronic Indicator for Angular Velocity and Acceleration. RB E4H21 (WR E-56), Aug. 1944.
- Boelter, L. M. K.; Poppendiek, H. F. and Gier, J. T.: An Investigation of Aircraft Heaters. XVII - Experimental Inquiry into Steady State Unidirectional Heat-Meter Corrections. ARR 4H09 (WR W-24), Aug. 1944.

- Boelter, L. M. K.; Poppendiek, H. F.; Dunkle, R. V. and Gier, J. T.: An Investigation of Aircraft Heaters. XXIV-The Heat Meter in the Transient State for Unidirectional Heat Transfer. ARR 4107 (WR W-30), Sept. 1944.
- Campbell, William R.: Performance Tests of Wire Strain Gages. I - Calibration Factors in Tension. TN 954, Nov. 1944.
- Zalovcik, John A. and Daum, Fred L.: Flight Investigation at High Mach Numbers of Several Methods of Measuring Static Pressure on an Airplane Wing. RB L4H10a (WR L-90), Nov. 1944.
- Dallas, Thomas; Hoss, Gene and Harries, Myron L.: A Preignition Indicator for Aircraft Engines. RB E5A31 (WR E-40), Feb. 1945.
- Walstrom, Douglas P.: Measurement of Operating Stresses in an Aircraft Engine Crankshaft Under Power. ARR E5B01 (WR E-41), Feb. 1945.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr. and Tuck, Vivian C.: The Oxidation of Exhaust Gases at Room Temperature. ARR E5B01a (WR E-62), Feb. 1945.
- Dingeldein, Richard C. and Schaefer, Raymond F.: High-Speed Photographs of a YR-4B Production Rotor Blade for Simulated Flight Conditions in the Langley Full-Scale Tunnel. MR L5C12c (WR L-631), March 1945.
- Gnam, E.: A New Apparatus for Measuring the Temperature at Machine Parts Rotating at High Speeds. TM 1080, April 1945.
- Boelter, L. M. K.; Bromberg, R.; Gier, J. T. and Dempster, E. R.: An Investigation of Aircraft Heaters. XXV Use of the Thermopile Radiometer. ARR 5A13 (WR W-88), April 1945.
- Humphreys, Milton D.: Effects of Compressibility and Large Angles of Yaw on Pressure Indicated by a Total-Pressure Tube. RB L5C30 (WR L-77), April 1945.
- Tolefson, H. B.: Airspeed Fluctuations as a Measure of Atmospheric Turbulence. ARR L5F27 (WR L-72), July 1945.
- Campbell, William R.: Performance Tests of Wire Strain Gages. II - Calibration Factors in Compression. TN 978, Sept. 1945.

- Sachs, George; Smith, Charles S.; Lubahn, Jack D.; Davis, Gordon E. and Ebert, Lynn J.: Nondestructive Measurement of Residual and Enforced Stresses by Means of X-ray Diffraction. I Correlated Abstract of the Literature. TN 986, Sept. 1945.
- Pendley, Robert E.: Effect of Propeller-Axis Angle of Attack on Thrust Distribution Over the Propeller Disk in Relation to Wake-Survey Measurement of Thrust. ARR L5J02b (WR L-517), Nov. 1945.
- Campbell, William R.: Performance Tests of Wire Strain Gages. III - Calibrations at High Tensile Strains. TN 997, Dec. 1945.
- Miller, Cearcy D.: The NACA High-Speed Motion-Picture Camera - Optical Compensation at 40,000 Photographs a Second. Rept. 856, 1946.
- Gardner, Clifford S. and LaHatte, James A., Jr.: Determination of Induced Velocity in Front of an Inclined Propeller by a Magnetic-Analogy Method. ARR L6A05b (WR L-154), Feb. 1946.
- Zalovcik, John A. and Wood, Clotaire: Static-Pressure Error of an Airspeed Installation on an Airplane in High-Speed Dives and Pull-Outs. RB L5K29a (WR L-43), Feb. 1946.
- Schubauer, G. B. and Klebanoff, P. S.: Theory and Application of Hot-Wire Instruments in the Investigation of Turbulent Boundary Layers. ACR 5K27 (WR W-86), March 1946.
- Warshawsky, Isidore: A Multiple Bridge for Elimination of Contact-Resistance Errors in Resistance Strain-Gage Measurements. TN 1031, March 1946.
- Weske, John R.: Measurement of the Arithmetic Mean Velocity of a Pulsating Flow of High Velocity by the Hot-Wire Method. TN 990, April 1946.
- Campbell, William R.: Errors in Indicated Strain for a Typical Wire Strain Gage Caused by Prestraining, Temperature Changes, and Weathering. TN 1011, April 1946.
- Miller, James A.: A Fixture for Compressive Tests of Thin Sheet Metal Between Lubricated Steel Guides. TN 1022, April 1946.
- Campbell, William R.: Performance Tests of Wire Strain Gages. IV - Axial and Transverse Sensitivities. TN 1042, June 1946.

- Kuhl, R. and Raab, K.: A Photographic Profile Recorder for Airscrews and Wing Models. TM 1088, June 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- Vogelpohl, G. and Mannesmann, D.: Flow Investigation with the Aid of the Ultramicroscope. TM 1109, Oct. 1946.
- Huber, Paul W. and Kantworitz, Arthur: A Device for Measuring Sonic Velocity and Compressor Mach Number. RM L6K14, Jan. 1947.
- McPherson, A. E.: Device for Measuring Principal Curvatures and Principal Strains on a Nearly Plane Surface. TN 1137, Feb. 1947.
- Friswold, Frank A.; Lewis, Ralph D. and Wheeler, R. Clyde, Jr.: An Improved Continuous-Indicating Dew-Point Meter. TN 1215, Feb. 1947.
- Cook, Harvey A.; Heinicke, Orville H. and Haynie, William H.: Spark-Timing Control Based on Correlation of Maximum-Economy Spark Timing, Flame-Front Travel, and Cylinder Pressure Rise. TN 1217, Feb. 1947.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr.; Scadron, Marvin D. and Colnar, Anthony: The NACA Mixture Analyzer and Its Application to Mixture-Distribution Measurement in Flight. TN 1238, March 1947.
- Cleaves, Alden P. and Carver, Mildred S.: A Spectrophotometric Method for Identification and Estimation of Alkylnaphthalenic-Type Hydrocarbons in Kerosene. TN 1243, April 1947.
- Ross, Robert D.: An Electrical Computer for the Solution of Shear-Lag and Bolted-Joint Problems. TN 1281, May 1947.
- Weigand, A.: Determination of the Stress Concentration Factor of a Stepped Shaft Stressed in Torsion by Means of Precision Strain Gauges. TM 1179, June 1947.
- Pollman, Erich: Temperatures and Stresses on Hollow Blades for Gas Turbines. TM 1183, June 1947.
- Campbell, W. R. and Medbery, A. F.:
 Performance Tests of Wire Strain
 Gages. V Error in Indicated Bending
 Strains in Thin Sheet Metal Due to
 Thickness and Rigidity of Gage. TN
 1318, July 1947.

- Miller, Cearcy D.: The Optical System of the NACA 400,000-Frame-Per-Second Motion-Picture Camera. TN 1405, Aug. 1947.
- Zobel, Th.: Development and Construction of an Interferometer for Optical Measurement of Density Field. TM 1184, Sept. 1947.
- Fucks, Wilhelm: Investigation of the Operating Properties of the Leakage Current Anemometer. TM 1178, Oct. 1947.
- Ekstein, Hans and Siegel, Stanley: Limits of Precision in the Determination of Lattice Parameters and Stresses by the Debye-Scherrer Method. TN 1375, Oct. 1947.
- Kittel, J. Howard: Comparison of Crystal Structures of 10 Wrought Heat-Resisting Alloys at Elevated Temperatures with Their Crystal Structures at Room Temperatures. TN 1488, Nov. 1947.
- Valerino, Michael F. and Kaufman, Samuel J.: Cylinder-Temperature and Cooling-Air-Pressure Instrumentation for Air-Cooled-Engine Cooling Investigations. TN 1509, Jan. 1948.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.

- Boelter, L. M. K.; Dempster, E. R.; Bromberg, R. and Gier, J. T.: An Investigation of Aircraft Heaters. XXVI-Development of a Sensitive Plated-Type Thermopile for Measuring Radiation. TN 1450, July 1948.
- Campbell, William R.: Tests of Six Types of Bakelite-Bonded Wire Strain Gages. TN 1656, July 1948.
- Huber, Paul W. and Kantrowitz, Arthur: A Device for Measuring Sonic Velocity and Compressor Mach Number. TN 1664, July 1948.
- Taback, Israel: The Response of Pressure Measuring Systems to Oscillating Pressures. TN 1819, Feb. 1949.
- Gooderum, Paul B.; Wood, George P. and Brevoort, Maurice J.: Investigation with an Interferometer of the Turbulent Mixing of a Free Supersonic Jet. TN 1857, April 1949.
- Corrsin, Stanley: Extended Applications of the Hot-Wire Anemometer. TN 1864, April 1949.
- Goldstein, David L. and Scherrer, Richard: Design and Calibration of a Total-Temperature Probe for Use at Supersonic Speeds. TN 1885, May 1949.
- Huber, Paul W.; Fitton, Cliff E., Jr. and Delpino, F.: Experimental Investigation of Moving Pressure Disturbances and Shock Waves and Correlation with One-Dimensional Unsteady-Flow Theory. TN 1903, July 1949.

Meteorological

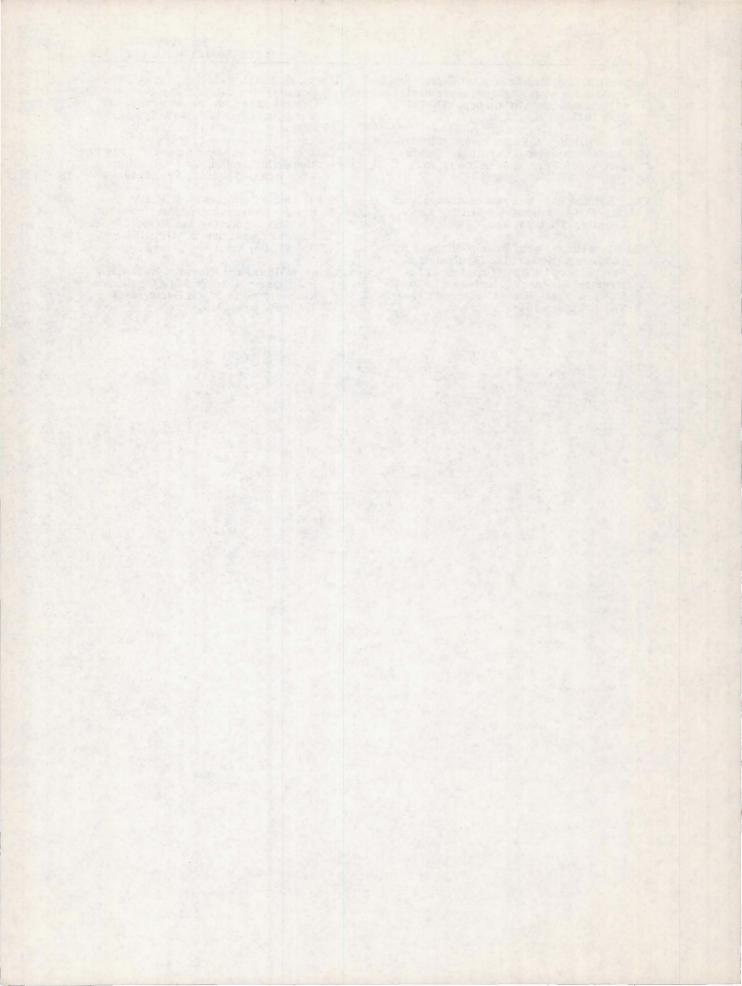
(8.3)

- Herschel, W. H.: Investigation of Pitot Tubes. Part I - The Pitot Tube and Other Anemometers for Airplanes. Buckingham, E.: Part II - The Theory of the Pitot and Venturi Tubes. Rept. 2, 1915.
- Warburg, E. and Heuse, W.: Aneroid Investigations in Germany. TN 72, Oct. 1921.
- Hunt, F. L.: Aeronautic Instruments. Section VIII - Recent Developments and Outstanding Problems. Rept. 132, 1922.
- Eaton, H. N. and Keulegan, G. H.: Sylphon Diaphragms. A Method for Predicting Their Performance for Purposes of Instrument Design. TN 90, May 1922.
- Huguenard, E.; Magnan, A. and Planiol, A.: A Method for the Instantaneous Determination of the Velocity and Direction of the Wing. TM 264, June 1924.
- Hersey, Mayo D.: Aeronautic Instruments -Section I - General Classification of Instruments and Problems Including Bibliography. Rept. 125, 1925.
- Eaton, H. N. and Buckingham, C. T.: Nonmetallic Diaphragms for Instruments. Rept. 206, 1925.
- Reid, H. J. E. and Kirchner, Otto E.: An Altitude Chamber for the Study and Calibration of Aeronautical Instruments. TN 229, Nov. 1925.
- Hemke, Paul E.: The Measurement of Pressure Through Tubes in Pressure Distribution Tests. Rept. 270, 1927.
- Keulegan, G. H.: Investigation of Damping Liquids for Aircraft Instruments. Rept. 299, 1929.
- Pinkerton, Robert M.: Calibration and Lag of a Friez Cup Anemometer. TN 341, June 1930.
- Lange, K. O.: Measurements of Vertical Air Currents in the Atmosphere. TM 648, Nov. 1931.
- Strother, D. H. and Henrickson, H. B.: Effect of Aging on Taut Rubber Diaphragms. TN 409, Feb. 1932.

- Brevoort, M. J. and Joyner, U. T.: Aerodynamic Characteristics of Anemometer Cups. TN 489, Feb. 1934.
- Hubbard, John D. and Brescoll, George P.: Aerodynamic Investigation of a Cup Anemometer. TN 502, July 1934.
- Brombacher, W. G.: Measurement of Altitude in Blind Flying. TN 503, Aug. 1934.
- Brevoort, M. J. and Joyner, U. T.: Experimental Investigation of the Robinson-Type Cup Anemometer. Rept. 513, 1935.
- Brombacher, W. G.: Altitude Pressure Tables for Calibrating Altimeters and Computing Altitudes Based on the United States Standard Atmosphere. Rept. 538, 1935.
- Puschmann, Traute: Materials for Slack Diaphragms. TM 964, Dec. 1940.
- Eckert, B.: Experiences with Flow-Direction Instruments. TM 969, March 1941.
- Peterson, John B.: Damping Characteristics of Dashpots. TN 830, Oct. 1941.
- Weske, John R.: Methods of Measurement of High Air Velocities by the Hot-Wire Method. TN 880, Feb. 1943.
- Weske, John R.: A Hot-Wire Circuit with Very Small Time Lag. TN 881, Feb. 1943.
- McPherson, Albert E.: A Portable Calibrator for Dynamic Strain Gages. TN 887, Feb. 1943.
- Hardy, J. K.: Measurement of Free Water in Cloud Under Conditions of Icing. ARR 4I11 (WR A-15), Oct. 1944.
- Hamermesh, Bernard; Reines, Frederick and Korff, Serge A.: A Photoelectric Hygrometer. TN 980, May 1945.
- Friswold, Frank A.; Lewis, Ralph D. and Wheeler, R. Clyde, Jr.: An Improved Continuous-Indicating Dew-Point Meter. TN 1215, Feb. 1947.

- Helfand, B. B.: Meteorological Conditions Associated with Flight Measurements of Atmospheric Turbulence. TN 1273, June 1947.
- Lewis, William: A Flight Investigation of the Meteorological Conditions Conducive to the Formation of Ice on Airplanes. TN 1393, Aug. 1947.
- Otto, Edward W.: Analysis of Accuracy of Gas-Filled Bellows for Sensing Gas Density. TN 1538, Feb. 1948.
- Malkus, Willem V. R.; Bishop, Richard H. and Briggs, Robert O.: Analysis and Preliminary Design of an Optical Instrument for the Measurement of Drop Size and Free-Water Content of Clouds. TN 1622, June 1948.

- Press, H. and Binckley, E. T.: A Preliminary Evaluation of the Use of Ground Radar for the Avoidance of Turbulent Clouds. TN 1684, Sept. 1948.
- Taback, Israel: The Response of Pressure Measuring Systems to Oscillating Pressures. TN 1819, Feb. 1949.
- Jones, Alun R. and Lewis, William: A Review of Instruments Developed for the Measurement of the Meteorological Factors Conducive to Aircraft Icing. RM A9C09, April 1949.
- Lewis, William and Hoecker, Walter H., Jr.: Observations of Icing Conditions Encountered in Flight During 1948. TN 1904, June 1949.



RESEARCH EQUIPMENT AND TECHNIQUES
(9)

Equipment

(9.1)

- Sabatier, J.: Large German Airship Stations. TM 36, Aug. 1921.
- Zahm, A. F.: The Six-Component Wind Balance. Rept. 146, 1922.
- Bacon, D. L.: Langley Field Wind Tunnel Apparatus. I - Regulators for Speed of Wind Tunnel Drive Motor. II - A Vernier Manometer with Adjustable Sensitivity. TN 81, Jan. 1922.
- Diehl, Walter S.: Notes on the Construction and Testing of Model Airplanes. TN 82, Jan. 1922.
- Katzmayr, R. and Kirste, L.: The Aerodynamical Laboratory of the Vienna Technical High School. TM 61, Feb. 1922.
- Jubera: Aerodynamic Laboratory at Cuatro Vientos. TM 134, Sept. 1922.
- Lesage, André: Technical Section of Aeronautics. TM 187, Feb. 1923.
- Robert, Lieut. Col.: The Laboratories of the Technical Section of Aeronautics (Service Technique de l'Aéronautique" or "S.T.Aé."). TM 188, Feb. 1923.
- Toussaint, A.: Lecture on Aerodynamics. TM 227, Sept. 1923.
- Ford, James B.: The Nichols Wing Cutting Equipment. TN 172, Dec. 1923.
- Zahm, A. F.: The Vector Ruling Protractor. TM 251, March 1924.
- Dollfuss, Charles: Historical Notes on Aerodynamic Research. TM 273, Aug. 1924.
- Prandtl, L.: First Experiences with the Rotating Laboratory. TM 372, July 1926.
- Bear, R. M.: Differential Pressures on a Pitot-Venturi and a Pitot-Static Nozzle over 360° Pitch and Yaw. Rept. 264, 1927.
- Heim, A. L.: Special Propeller Protractor. TN 272, Jan. 1928.
- From L'Aeronautique, No. 100, September, 1927: Synopsis of French Aeronautic Equipment - Aeronautic Instruments. TM 476, Aug. 1928.

- Miller, M. P.: An Accurate Method of Measuring the Moments of Inertia of Airplanes. TN 351, Oct. 1930.
- Jacobs, Eastman N. and Abott, Ira H.: Experiments with a Model Water Tunnel. TN 358, Dec. 1930.
- Karner, L. and Ackeret, J.: Aeronautical Education and Research at the Swiss Institute of Technology in Zurich. TM 616, April 1931.
- Klemperer, W. B.: Measurement of the Forces Acting on Gliders in Towed Flight. TN 753, Feb. 1940.
- Ferrari, Carlo: Electrical Equipment for the Experimental Study of the Dynamics of Fluids. TM 1006, March 1942.
- Lindsey, W. F.: Calibration of Three Temperature Probes and a Pressure Probe at High Speeds. ARR (WR L-273), April 1942.
- Swanson, Robert S. and Schuldenfrei,
 Marvin J.: Jet-Boundary Corrections
 to the Downwash Behind Powered
 Models in Rectangular Wind Tunnels
 with Numerical Values for 7- by 10Foot Closed Wind Tunnels. ARR (WR.
 L-711), Aug. 1942.
- Workman, E. J.; Holzer, R. E. and Pelsor, G. T.: The Electrical Structure of Thunderstorms. TN 864, Nov. 1942.
- Swanson, Robert S.: Jet-Boundary Corrections to a Yawed Model in a Closed Rectangular Wind Tunnel. ARR (WR L-603), Feb. 1943.
- Smith, Norman F.: NACA Mach Number Indicator for Use in High-Speed Tunnels. ACR 3G31 (WR L-423), July 1943.
- Swanson, Robert S. and Gillis, Clarence L.: Wind-Tunnel Calibration and Correction Procedures for Three-Dimensional Models. ARR L4E31 (WR L-1), Oct. 1944.
- Leary, W. A. and Jovellanos, J. U.: A Study of Piston and Ring Friction. ARR 4J06 (WR W-47), Nov. 1944.

- Clousing, Lawrence A.; Turner, William N. and Rolls, L. Stewart: Measurements in Flight of the Pressure Distribution on the Right Wing of a P-39N-1 Airplane at Several Values of Mach Number. Rept. 859, 1946.
- Schubauer, G. B. and Klebanoff, P. S.: Theory and Application of Hot-Wire Instruments in the Investigation of Turbulent Boundary Layers. ACR 5K27 (WR W-87), March 1946.
- Kuhl, R. and Raab, K.: A Photographic Profile Recorder for Airscrews and Wing Models. TM 1088, June 1946.
- Runyan, Raymond A. and Jeffries, Robert J.: Empirical Method for Frequency Compensation of the Hot-Wire Anemometer. TN 1331, June 1947.
- Kovasznay, Laszlo: Calibration and Measurement in Turbulence Research by the Hot-Wire Method. TM 1130, June 1947.
- Zobel, Th.: Development and Construction of an Interferometer for Optical Measurement of Density Field. TM 1184, Sept. 1947.
- Johnson, Daniel P.: Calibration of Altimeters Under Pressure Conditions Simulating Dives and Climbs. TN 1562, March 1948.
- Carpenter, Paul J.: Effect of Wind Velocity on Performance of Helicopter Rotors as Investigated with the Langley Helicopter Apparatus. TN 1698, Oct. 1948.
- Taback, Israel: The Response of Pressure Measuring Systems to Oscillating Pressures. TN 1819, Feb. 1949.
- Williams, Thomas W. and Benson, James M.: Freliminary Investigation of the Use of Afterglow for Visualizing Low-Density Compressible Flows. TN 1900, June 1949.

WIND TUNNELS

(9.1.1)

- Marchis, L.: Experimental Researches on the Resistance of Air. Rept. 12, 1916.
- Warner, Edward P.; Norton, F. H. and Hebbert, C. M.: The Design of Wind Tunnels and Wind Tunnel Propellers. Rept. 73, 1919.
- Warner, Edward P. and Norton, F. H.: Wind-Tunnel Balances. Rept. 72, 1920.

- Caldwell, F. W. and Fales, E. N.: Wind-Tunnel Studies in Aerodynamic Phenomena at High Speed. Rept. 83, 1920.
- Knight, Wm., Paris Office, NACA: Italian and French Experiments on Wind Tunnels. TN 17, Nov. 1920.
- Prandtl, L.: Gottingen Wind Tunnel for Testing Aircraft Models. TN 66, Nov. 1920.
- Norton, F. H.: Design of Recording Wind Tunnel Balances. TN 30, Dec. 1920.
- Norton, F. H. and Warner, Edward P.: Design of Wind Tunnels and Wind-Tunnel Propellers, II. Rept. 98, 1921.
- Norton, F. H. and Bacon, D. L.: The Optical Wing Aligning Device of the Langley Field Tunnel. TN 35, Jan. 1921.
- Munk, Max: On a New Type of Wind Tunnel. TN 60, May 1921.
- Margoulis, W.: A New Method of Testing Models in Wind Tunnels. TN 52, Aug. 1921.
- Bacon, D. L.: Langley Field Wind Tunnel Apparatus. TN 65, Oct. 1921.
- Katzmayr, R. and Kirste, L.: The Aerodynamical Laboratory of the Vienna Technical High School. TM 61, Feb. 1922.
- Miller, Wm. H.: The Efficiency of a Wind Tunnel. TM 65, Feb. 1922.
- Ide, J. J.: Wind Tunnel at Issy-Les-Moulineaux. MP 7, March 1922.
- Robert, Lt. Col.: Applying the Results of Experiments on Small Models in the Wind Tunnel to the Calculation of Full-Sized Aircraft. TM 84, April 1922.
- Munk, Max M.: Wind Tunnel of Zeppelin Airship Company. TM 202, April 1923.
- Robert, Lt. Col.: The New French High-Speed Wind Tunnel. TM 205, May 1923.
- Warner, Edward P.: The Toronto Aerodynamical Laboratory. MP 15, Aug. 1923.
- Reid, Elliott G.: Standardization Tests of NACA No. 1 Wind Tunnel. Rept. 195, 1924.
- Robert, Lt. Col.: Methods of Experimentation with Models and Utilization of Results. TM 247, Feb. 1924.

- Wind Tunnels (Cont.)
- Wieselsberger, C.: Wind Tunnel Tests of Correction Formula for Wings of Large Span. TM 263, May 1924.
- Anon.: The Aerodynamic Laboratory of the Belgian "Service Technique de L'Aeronautique." TM 292, Dec. 1924.
- Ziembinski, S.: Motive Power Required to Operate a Wind Tunnel. TM 294, Dec. 1924.
- Reid, Elliott G.: Interference Tests on an NACA Pitot Tube. Rept. 199, 1925.
- From Report A 77 of the "Rijks-Studie-dienst voor de Luchtvaart": Experimental Determination of Pressure Drop Caused by Wire Gauze in an Air Stream. TM 296, Jan. 1925.
- Huguenard, E.: High Velocity Wind Tunnels. (Their Application to Ballistics, Aerodynamics and Aeronautics.) TM 318, June 1925.
- Kerneis, Jean: Wire Suspensions in Wind Tunnel Experiments. TM 342, Dec. 1925.
- Munk, Max M. and Miller, Elton W.: The Variable Density Wind Tunnel of the National Advisory Committee for Aeronautics. II - Description of Tunnel. Rept. 227, 1926.
- Dryden, H. L. and Heald, R. H.: Investigation of Turbulence in Wind Tunnels by a Study of the Flow About Cylinders. Rept. 231, 1926.
- Fales, E. N.: Apparatus for High-Speed Research, Applicable to Propeller Tip Effect and Comments of Mr. Ackeret and Dr. Prandtl on Certain Features of the Göttingen Wind Tunnel. MP 19, Jan. 1926.
- Witoszynski, Professor C.: Change of 180° in the Direction of a Uniform Current of Air. TM 350, Feb. 1926.
- From Bulletin of the Technical Service of Aeronautics (Brussels), January, 1926: The Belgian Aerotechnical Laboratory at Rhode-Saint-Genese. TM 377, Sept. 1926.
- Margoulis, W.: Central Aerohydrodynamic Institute of Moscow, Russia. TM 386, Nov. 1926.
- Higgins, George J.: The Effect of the Walls in Closed Type Wind Tunnels. Rept. 275, 1927.
- Caracciolo, Moreno: Aerodynamic Laboratory at Cuatro Vientos. TM 414, June 1927.

- Weick, Fred E.: Study of Open Jet Wind Tunnel Cones. TN 260, Aug. 1927.
- Weick, Fred E. and Wood, Donald H.: The Twenty-Foot Propeller Research Tunnel of the National Advisory Committee for Aeronautics. Rept. 300, 1928.
- Zahm, A. F.: An Automatic Speed Control for Wind Tunnels. TN 278, Feb. 1928.
- Wieselsberger, C.: On Improvement of Air Flow in Wind Tunnels. TM 470, July 1928.
- Jacobs, Eastman N.: Investigation of Air Flow in Open-Throat Wind Tunnels. Rept. 322, 1929.
- Katzmayr, R.: Aeromechanical Experimentation (Wind Tunnel Tests). TM 508, April 1929.
- Knight, Montgomery and Harris, Thomas A.: Experimental Determination of Jet Boundary Corrections for Airfoil Tests in Four Open Wind-Tunnel Jets of Different Shapes. Rept. 361, 1930.
- Rebuffet, P.: The Electrodynamometric Balance of the Small Wind Tunnel of the French Service of Aeronautical Research. TM 556, March 1930.
- Wenzinger, Carl J. and Harris, Thomas A.: The Vertical Wind Tunnel of the National Advisory Committee for Aeronautics. Rept. 387, 1931.
- Jacobs, Eastman N.: The Aerodynamic Characteristics of Eight Very Thick Airfoils from Tests in the Variable Density Wind Tunnel. Rept. 391, 1931.
- Abbott, Ira H.: Airship Model Tests in the Variable Density Wind Tunnel. Rept. 394, 1931.
- Theodorsen, Theodore: The Theory of Wind-Tunnel Wall Interference. Rept. 410, 1931.
- Harris, Thomas A.: The 7 by 10 Foot Wind Tunnel of the National Advisory Committee for Aeronautics. Rept. 412, 1931.
- From Flug, Nos. 7 and 8, July-August, 1931: Dynamic Wind-Tunnel Control. MP 30, Oct. 1931.
- Anon.: Wind Tunnel of the Bucharest Polytechnic Institute. TM 651, Dec. 1931.
- Jacobs, Eastman N. and Abbott, Ira H.: The NACA Variable-Density Wind Tunnel. Rept. 416, 1932.

- Wind Tunnels (Cont.)
- DeFrance, Smith J.: The NACA Full-Scale Wind Tunnel. Rept. 459, 1933.
- Stack, John: The NACA High-Speed Wind Tunnel and Tests of Six Propeller Sections. Rept. 463, 1933.
- Prandtl, L.: Attaining a Steady Air Stream in Wind Tunnels. TM 726, Oct. 1933.
- Seewald, Friedrich: The Small Wind Tunnel of the DVL. TM 734, Jan. 1934.
- Wieselsberger, C.: The Aachen Wind-Tunnel Balance. TM 757, Nov. 1934.
- Anon.: The Denis-Gruson Six-Component Wind-Tunnel Balance. TM 772, July 1935.
- Desmond, G. L. and McCrary, J. A.: The 6-Foot-4-Inch Wind Tunnel at the Washington Navy Yard. TN 536, Aug. 1935.
- Malmer, Ivar: The Aeronautical Laboratory of the Stockholm Technical Institute. TM 766, March 1935.
- Zimmerman, C. H.: Preliminary Tests in the NACA Free-Spinning Wind Tunnel. Rept. 557, 1936.
- Platt, Robert C.: Turbulence Factors of NACA Wind Tunnels as Determined by Sphere Tests. Rept. 558, 1936.
- Kramer, M.: The 5- by 7-Meter Wind Tunnel of the DVL. TM 788, March 1936.
- Ackeret, J.: High-Speed Wind Tunnels. TM 808, Nov. 1936.
- Dryden, Hugh L.; Schubauer, G. B.; Mock, W. C., Jr. and Skramstad, H. K.: Measurements of Intensity and Scale of Wind-Tunnel Turbulence and Their Relation to the Critical Reynolds Number of Spheres. Rept. 581, 1937.
- Mock, W. C., Jr.: Alternating-Current Equipment for the Measurement of Fluctuations of Air Speed in Turbulent Flow. Rept. 598, 1937.
- Bamber, M. J. and House, R. O.: Spinning Characteristics of the XN2Y-1 Airplane Obtained from the Spinning Balance and Compared with Results from the Spinning Tunnel and from Flight Tests. Rept. 607, 1937.
- Kramer, M. and Krüger, K. B.: A New Spinning-Test Method. TM 859, April 1938.
- Schlichting, H.: The Dornier Wind Tunnel. TM 868, June 1938.

- Pittoni, Mario: The Breda Wind Tunnel. TM 922, Dec. 1939.
- Donely, Philip and Shufflebarger, C. C.: Tests of a Gust-Alleviating Flap in the Gust Tunnel. TN 745, Jan. 1940.
- Shortal, Joseph A. and Osterhout, Clayton J.: Preliminary Stability and Control Tests in the NACA Free-Flight Wind Tunnel and Correlation with Full-Scale Flight Tests. TN 810, June 1941.
- Stoller, Morton J. and Ribner, Herbert S.:
 A Remote Indicating Hinge-Moment
 Balance. ACR, Aug. 1941.
- Allen, H. Julian and Vincenti, Walter G.:
 Wall Interference in a Two-Dimensional-Flow Wind Tunnel, with Consideration of the Effect of Compressibility. Rept. 782, 1944.
- Graham, Donald J.: Tunnel-Wall Corrections to Rolling and Yawing-Moments
 Due to Aileron Deflection in Closed
 Rectangular Wind Tunnels. ARR 4F21
 (WR A-14), Jan. 1944.
- Corrsin, Stanley: Investigation of the Behavior of Parallel Two-Dimensional Air Jets. ACR 4H24 (WR W-90), Nov. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Dingeldein, Richard C. and Schaefer, Raymond F.: High-Speed Photographs of a YR-4B Production Rotor Blade for Simulated Flight Conditions in the Langley Full-Scale Tunnel. MR L5C12c (WR L-631), March 1945.
- Ferri, Antonio: Completed Tabulation in the United States of Tests of 24 Airfoils at High Mach Numbers (Derived from Interrupted Work at Guidonia, Italy in the 1.31- by 1.74-Foot High-Speed Tunnel. ACR L5E21 (WR L-143), June 1945.
- Huber, Paul W.: Use of Freon-12 as a Fluid for Aerodynamic Testing. TN 1024, April 1946.
- Perl, W. and Moses, H. E.: Velocity Distributions on Symmetrical Airfoils in Closed Tunnels by Conformal Mapping. ARR E6H23, Sept. 1946.
- Pretsch, J.: Calibration Tunnel for High Speed. TM 1103, Oct. 1946.
- Tucker, M. and Rousso, M. D.: Experimental Investigation of the Jet-Boundary Constriction Correction for a Model Spanning a Closed Circular Tunnel. RM E6K26a, Nov. 1946.

Wind Tunnels (Cont.)

- Mendelsohn, Robert A. and Polhamus, Josephine F.: Effect of the Tunnel-Wall Boundary Layer on Test Results of a Wing Protruding from a Tunnel Wall. TN 1244, April 1947.
- Eisenstadt, Bertram J.: Boundary-Induced Upwash for Yawed and Swept-Back Wings in Closed Circular Wind Tunnels. TN 1265, May 1947.
- Von Doenhoff, Albert E. and Abbott, Frank T., Jr.: The Langley Two-Dimensional Low-Turbulence Pressure Tunnel. TN 1283, May 1947.
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.
- Von Baranoff, A.: Tunnel Correction for Compressible Subsonic Flow. TM 1162, July 1947.
- Ludwieg, H.: Drag Corrections in High-Speed Wind Tunnels. TM 1163, July 1947.
- Regenscheit, B.: Drag Reduction by Suction of the Boundary Layer Separated Behind Shock Wave Formation at High Mach Numbers. TM 1168, July 1947.
- Gothert, B.: Comparison of Drop and Wind-Tunnel Experiments on Bomb Drag at High Subsonic Speeds. TM 1186, May 1948.
- Schubauer, G. B. and Spangenberg, W. G.: Effect of Screens in Wide-Angle Diffusers. TN 1610, July 1948.
- Dryden, Hugh L. and Abbott, Ira H.: The Design of Low-Turbulence Wind Tunnels. TN 1755, Nov. 1948.
- Katzoff, S.; Gardner, Clifford S.; Diesendruck, Leo and Eisenstadt, Bertram J.: Linear Theory of Boundary Effects in Open Wind Tunnels with Finite Jet Length. TN 1826, March 1949.
- Gooderum, Paul B.; Wood, George P. and Brevoort, Maurice J.: Investigation with an Interferometer of the Turbulent Mixing of a Free Supersonic Jet. TN 1857, April 1949.
- Huber, Paul W.; Fitton, Cliff E., Jr. and Delpino, F.: Experimental Investigation of Moving Pressure Disturbances and Shock Waves and Correlation with One-Dimensional Unsteady-Flow Theory. TN 1903, July 1949.
- Zobel, Th.: Flow Measurement by Means of Light Interferences. TM 1253, Aug. 1949.

FREE FLIGHT

(9.1.2)

- The National Advisory Committee for Aeronautics: General Specifications Covering Requirements of Aeronautic Instruments. Rept. 8, 1916.
- Warner, E. P.: Notes on the Theory of the Accelerometer. TN 3, May 1920.
- Hersey, Mayo D.; Hunt, Franklin L. and Eaton, Herbert N.: The Altitude Effect on Air Speed Indicators. Rept. 110, 1921.
- Eaton, H. N.: Aeronautic Instruments -Section VII. Aerial Navigation and Navigating Instruments. Rept. 131, 1922.
- Norton, F. H.: A Preliminary Investigation of a New Method for Testing Aerofoils in Free Flight. TN 77, Jan. 1922.
- Espenlaub, Lippisch: Problem of Glider Models. TM 136, Sept. 1922.
- Reid, H. J. E.: The NACA Three-Component Accelerometer. TN 112, Oct. 1922.
- Brown, W. G.: The Synchronization of NACA Flight Records. TN 117, Oct. 1922.
- Hersey, M. D.: Diaphragms for Aeronautic Instruments. Rept. 165, 1923.
- Heidelberg, V. and Hölzel, A.: Speed Measurements Made by Division "A" of the Airplane Directorate (Flugzeugmeisterei), Subdivision for Flight Experiments. TN 147, July 1923.
- Robrovsky, T.: Device for Measuring Sound in Airplane Engines. TM 266, June 1924.
- Reid, Elliott G.: Interference Tests on an NACA Pitot Tube. Rept. 199, 1925.
- Diehl, Walter S. and Lesley, E. P.: The Reduction of Airplane Flight Test Data to Standard Atmosphere Conditions. Rept. 216, 1925.
- Von Baumhauer, A. G.: Photographic Time Studies of Airplane Paths. TM 345, Jan. 1926.
- Koppe, Heinrich: Flight Tests on Airplanes. TM 359, April 1926.
- Carroll, Thomas: A Comparison of the Take-Off and Landing Characteristics of a Number of Service Airplanes. Rept. 249, 1927.

- Free Flight (Cont.)
- Carroll, Thomas and McAvoy, William H.: The Variation in Pressures in the Cockpit of an Airplane in Flight. TN 300, Nov. 1928.
- Crowley, J. W., Jr. and Green, M. W.: An Investigation of the Aerodynamic Characteristics of an Airplane Equipped with Several Different Sets of Wings. Rept. 304, 1929.
- Thompson, F. L.: Water Pressure Distribution on a Twin-Float Seaplane. Rept. 328, 1929.
- Spieweck, Bruno: Photogrammetric Take-Off and Landing Measurements. TM 496, Jan. 1929.
- Seewald, F.: Force Measurements on Airplanes. TM 519, June 1929.
- Dearborn, C. H. and Kirschbaum, H. W.: Maneuverability Investigation of the F6C-3 Airplane with Special Flight Instruments. Rept. 369, 1930.
- Schrenk, Martin: Measurement of Profile Drag on an Airplane in Flight by the Momentum Method. Part I. TM 557, March 1930.
- Schrenk, Martin: Measurement of Profile Drag on an Airplane in Flight by the Momentum Method. Part II. TM 558, March 1930.
- Soulé, Hartley A. and Scudder, Nathan F.:
 A Method of Flight Measurement of
 Spins. Rept. 377, 1931.
- Gough, Melvin N.: The Variation in Pressure in the Cabin of an Airplane in Flight. TN 368, March 1931.
- Gough, Melvin N. and Johnson, Ernest: Methods of Visually Determining the Air Flow Around Airplanes. TN 425, July 1932.
- Mock, W. C., Jr.: Alternating-Current Equipment for the Measurement of Fluctuations of Air Speed in Turbulent Flow. Rept. 598, 1937.
- Peterson, John B. and Womack, S. H. J.: Electrical Thermometers for Aircraft. Rept. 606, 1937.
- Schmidt, Rudolph: The Scale Effect in Towing Tests with Airplane Float Systems. TM 826, May 1937.
- Koning, C. and DeHaas, T. P.: The Critical Velocity of a Body Towed by a Cable from an Airplane. TM 832, July 1937.
- Danielzig, Helmut: Behavior of Static Pressure Heads at High Speeds. TM 865, June 1938.

- Seidman, Oscar and Neihouse, A. I.: Comparison of Free-Spinning Wind-Tunnel Results with Corresponding Full-Scale Spin Results. MR (WR L-737), Dec. 1938.
- Sontag, Harcourt and Brombacher, W. G.: Aircraft Power-Plant Instruments. Rept. 466, 1941.
- Shortal, Joseph A. and Osterhout, Clayton J.: Preliminary Stability and Control Tests in the NACA Free-Flight Wind Tunnel and Correlation with Full-Scale Flight Tests. TN 810, June 1941.
- Chandler, H. C., Jr.: Survey of Aircraft Anti-Icing Equipment. OCR, Feb. 1942.
- Bemis, John R. and Houghton, Henry G., Jr.: An Instrument for the Determination of Rain Densities in Flight. ARR 3E18 (WR W-42), May 1943.
- Tolefson, H. B.: XC-35 Gust Research Project Bulletin No. 9. Flight Measurement of Liquid-Water Content of Clouds and Precipitation Regions. RB L4E17, May 1944.
- Liebe, Wolfgang: DVL Angular Velocity Recorder. TM 1065, Aug. 1944.
- Stability and Control Section, Flight Research Division: Charts Showing Stability and Control Characteristics of Airplanes in Flight. MR L4L26 (WR L-706), Dec. 1944.
- Draper, C. S.; Taylor, E. S.; Lancor, J. H. and Coffey, R. T.: Development of a Detonation Detector Suitable for Use in Flight. TN 977, Dec. 1944.
- Cohen, Doris: Analytical Investigation of the Stability of an F8F Dropping Model with Automatic Stabilization - TED No. NAM 2466. MR L5L03 (WR L-780), Dec. 1945.
- Lindsey, W. F.: Calibrations of Service Pitot Tubes in the Langley 24-Inch High Speed Tunnel. MR L6A08 (WR L-580), Feb. 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr.; Scadron, Marvin D. and Colnar, Anthony: The NACA Mixture Analyzer and Its Application to Mixture-Distribution Measurement in Flight. TN 1238, March 1947.

Free Flight (Cont.)

- Letko, William: Investigation of the Fuselage Interference on a Pitot-Static Tube Extending Forward from the Nose of the Fuselage. TN 1496, Dec. 1947.
- Göthert, B.: Comparison of Drop and Wind-Tunnel Experiments on Bomb Drag at High Subsonic Speeds. TM 1186, May 1948.
- Cooper, George E. and Rathert, George A., Jr.: Visual Observations of the Shock Wave in Flight. RM A8C25, May 1948.
- Huston, Wilber B.: Accuracy of Airspeed Measurements and Flight Calibration Procedures. TN 1605, June 1948.
- Kauffman, William M.; Smith, Allan; Liddell, Charles J., Jr. and Cooper, George E.: Flight Tests of an Apparatus for Varying Dihedral Effect in Flight. TN 1788, Dec. 1948.
- Phillips, William H.: Theoretical Analysis of Oscillations of a Towed Cable. TN 1796, Jan. 1949.
- Jones, Alun R. and Lewis, William: A Review of Instruments Developed for the Measurement of the Meteorological Factors Conducive to Aircraft Icing. RM A9C09, April 1949.

TOWING TANKS AND IMPACT BASINS

(9.1.3)

- Gebers, Friedrich: Law of Similitude for the Surface Resistance of Lacquered Planes Moving in a Straight Line Through Water. TM 308, April 1925.
- Benoit, Lieutenant: Designing Seaplane Hulls and Floats. TM 376, Aug. 1926.
- Herrmann, H.; Kempf, G. and Kloess, H.: Tank Tests of Twin Seaplane Floats. TM 486, Oct. 1928.
- Schroder, P.: Towing Tests of Models as an Aid in the Design of Seaplanes. TM 676, July 1932.
- Truscott, Starr: The NACA Tank A High-Speed Towing Basin for Testing Models of Seaplane Floats. Rept. 470, 1933.
- Sottorf, W.: Scale Effect of Model in Seaplane-Float Investigations. TM 704, April 1933.

- Kempf, G. and Sottorf, W.: The High-Speed Tank of the Hamburg Shipbuilding Company. TM 735, Feb. 1934.
- Pabst, Wilhelm: The Development of Floats and Equipment for Research in Promoting It. TM 740, March 1934.
- Truscott, Starr: The Wave Suppressors
 Used in the NACA Tank. TN 513, Dec.
 1934.
- Schmidt, Rudolph: The Scale Effect in Towing Tests with Airplane Float Systems. TM 826, May 1937.
- Cremona, C.: Investigations and Tests in the Towing Basin at Guidonia. TM 892, April 1939.
- Truscott, Starr: The Enlarged NACA Tank, and Some of Its Work. TM 918, Nov. 1939.
- Ward, Kenneth E.: A New Method of Studying the Flow of the Water Along the Bottom of a Model of a Flying-Boat Hull. TN 749, Feb. 1940.
- Olson, Roland E. and Land, Norman S.: Methods Used in the NACA Tank for the Investigation of the Longitudinal-Stability Characteristics of Models of Flying Boats. Rept. 753, 1943.
- Bell, Joe W. and Havens, Robert F.: Tank Tests of a 1/8-Size Dynamic Model of the PB2Y-3 Airplane with Simulated Jet Motors - NACA Models 131J, 131J-1, and 131J-2. MR (WR L-687), June 1943.
- Dawson, John R. and Jarvis, George A.:
 Ditching Tests With a 1/10-Size
 Model of the Army A-20A Airplane.
 I Calm-Water Tests in NACA Tank
 No. 2. MR (WR L-584), Nov. 1943.
- Batterson, Sidney A.: The NACA Impact Basin and Water Landing Tests of a Float Model at Various Velocities and Weights. Rept. 795, 1944.
- Benson, James M. and Bidwell, Jerold M.:
 Bibliography and Review of Information
 Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept.
 1945.
- Pierson, J. D.: JRM-1 Landing Impact Characteristics from Model Tests. ARR 5L03 (WR W-106), Feb. 1946.
- Garrison, Charlie C.; Goldenbaum, David M. and Hacskaylo, Andrew: Correlation of the Trim Limits of Stability Obtained for a PB2Y-3 Flying Boat and a 1/8-Size Powered Dynamic Model. RM L7C04, April 1947.

PROPULSION RESEARCH EQUIPMENT

(9.1.4)

- Lucke, Charles Edward, assisted by Willhöfft, Friederich Otto: Carburetor Design - A Preliminary Study of the State of the Art. Rept. 11, 1916.
- Dickinson, H. C. and Boutell, H. G.: The Altitude Laboratory for the Testing of Aircraft Engines. Rept. 44, 1920.
- Tice, Percival S. and Dickinson, H. C.: Metering Characteristics of Carburetors. Rept. 49, 1920.
- Kemble, E. C.: Calculation of Low-Pressure Indicator Diagrams. Rept. 50, 1920.
- Wood, Karl D.: A Variable Speed Fan Dynomometer. TN 26, Dec. 1920.
- Sparrow, S. W.: Instrument for Measuring Engine Clearance Volumes. TN 27, Dec. 1920.
- Dickinson, H. C. and Newell, F. B.: A High-Speed Engine Pressure Indicator of the Balanced Diaphragm Type. Rept. 107, 1921.
- Everling, E.: The Dynamometer Hub and the Flywheel of the Engine. TM 25, June 1921.
- Segre, Marco: A New Dynamometer Brake. TM 44, Sept. 1921.
- Capetti, Antonio: New Equipment for Testing Light Engines in the Aeronautical Laboratory of the Royal Polytechnic Institute, Turin. MP 9, Sept. 1922
- Stevens, F. W.: A Constant Pressure Bomb. Rept. 176, 1923.
- Gove, W. D. and Green, M. W.: The Direct Measurement of Engine Power on an Airplane in Flight with a Hub Type Dynamometer. Rept. 252, 1927.
- Beardsley, Edward G.: The NACA Photographic Apparatus for Studying Fuel Sprays from Oil Engine Injection Valves and Test Results from Several Researches. Rept. 274, 1927.
- Spanogle, J. A. and Collins, John H., Jr.: A Balanced Diaphragm Type of Maximum Cylinder Pressure Indicator. TN 359, Dec. 1930.

- Rothrock, A. M.: The NACA Apparatus for Studying the Formation and Combustion of Fuel Sprays and the Results from Preliminary Tests. TN 389, Sept. 1931.
- Stickle, George W.: Measurement of the Differential and Total Thrust and Torque of Six Full-Scale Adjustable-Pitch Propellers. Rept. 421, 1932.
- Rothrock, A. M.: The NACA Apparatus for Studying the Formation and Combustion of Fuel Sprays and the Results from Preliminary Tests. Rept. 429, 1932.
- Spanogle, J. A. and Buckley, E. C.: The NACA Combustion Chamber Gas-Sampling Valve and Some Preliminary Test Results. TN 454, March 1933.
- Peterson, John B. and Womack, S. H. J.: Electrical Thermometers for Aircraft. Rept. 606, 1937.
- Hartman, Edwin P. and Biermann, David: The Torsional and Bending Deflection of Full-Scale Aluminum-Alloy Propeller Blades Under Normal Operating Conditions. Rept. 644, 1938.
- Tozier, Robert E.: The NACA Optical Engine Indicator. TN 634, Jan. 1938.
- Manganiello, Eugene J.: Piston Temperatures in an Air-Cooled Engine for Various Operating Conditions. Rept. 698, 1940.
- Sontag, Harcourt and Brombacher, W. G.: Aircraft Power-Plant Instruments. Rept. 466, 1941.
- Brevoort, M. J. and Tifford, A. N.: An Experimental Investigation of Flow Across Tube Banks. ARR (WR L-232), March 1942.
- Sanders, J. C.; Wilsted, H. D. and Mulcahy, B. A.: Operating Temperatures of a Sodium-Cooled Exhaust Valve as Measured by a Thermocouple. Rept. 754, 1943.
- Gerrish, Harold C. and Meem, J. Lawrence, Jr.: The Measurement of Fuel-Air Ratio by Analysis of the Oxidized Exhaust Gas. Rept. 757, 1943.
- Cook, Harvey A. and Olson, Walter T.: Small-Orifice Tubes for Minimizing Dilution in Exhaust-Gas Samples. ARR, Feb. 1943.
- Forbes, J. E. and Taylor, E. S.: A Method for Studying Piston Friction. ARR (WR W-37), March 1943.

- Propulsion Research Equipment (Cont.)
- Nettles, J. Cary and Tucker, Maurice: Construction of Wire Strain Gages for Engine Application. ARR 3L03 (WR E-122), Dec. 1943.
- Kuhn, M.: Piston Ring Pressure Distribution. TM 1056, Dec. 1943.
- Ebihara, Keikiti: Researches on the Piston Ring. TM 1057, Feb. 1944.
- Moore, Charles S.; Biermann, Arnold E. and Voss, Fred: The NACA Balanced-Diaphragm Dynamometer-Torque Indicator. RB 4C28 (WR E-139), March 1944.
- Voglewede, T. J.: A Proposed Method of Measuring Engine Charge Air Flow in Flight. CB L4E25 (WR L-200), May 1944.
- Koffel, William K. and Biermann, Arnold E.: A Unit Laboratory Engine Oil System Providing for a Remote Indication of Oil Flow and Oil Consumption Together with Blow-by Measurement. TN 952, Sept. 1944.
- Draper, C. S.; Taylor, E. S.; Lancor, J. H. and Coffey, R. T.: Development of a Detonation Detector Suitable for Use in Flight. TN 977, Dec. 1944.
- Walstrom, Douglas P.: Measurement of Operating Stresses in an Aircraft Engine Crankshaft Under Power. ARR E5B01 (WR E-41), Feb. 1945.
- Dingeldein, Richard C. and Schaefer, Raymond F.: High-Speed Photographs of a YR-4B Production Rotor Blade for Simulated Flight Conditions in the Langley Full-Scale Tunnel. MR L5C12c (WR L-631), March 1945.
- Dutee, Francis J.; Phillips, Franklyn W. and Kemp, Richard H.: Operating Stresses in Aircraft-Engine Crankshafts and Connecting Rods. I Slip-Ring and Brush Combinations for Dynamic-Strain Measurements. MR E5C30 (WR E-187), March 1945.
- Nettles, J. Cary and Hanson, Morgan P.: Flight Tests of a P-63A-1 Airplane with an Electric Torquemeter. ARR E5B16 (WR E-64), March 1945.
- Cook, Harvey A. and Brightwell, Virginia
 L.: Relation Between Fuel Economy
 and Crank Angle for the Maximum Rate
 of Pressure Rise. MR E5E21 (WR
 E-179), May 1945.

- Dutee, Francis J.; Phillips, Franklyn W. and Calvert, Howard F.: Operating Stresses in Aircraft-Engine Crankshafts and Connecting Rods. II Instrumentation and Test Results. MR E5H18 (WR E-191), Aug. 1945.
- Mulholland, Donald R.; Rollin, Vern G. and Galvin, Herman B.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. I Description of Setup and Testing Technique. MR E5L13 (WR E-170), Dec. 1945.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- Manson, S. S.: The Determination of Elastic Stresses in Gas-Turbine Disks. Rept. 871, 1947.
- Bohanon, H. R.; Gabriel, David S. and Essig, Robert H.: Jet Diffuser for Simulating Ram Conditions on a Turbojet-Engine Static Test Stand. RM E6K29, Jan. 1947.
- Cook, Harvey A.; Heinicke, Orville H. and Haynie, William H.: Spark-Timing Control Based on Correlation of Maximum-Economy Spark Timing, Flame-Front Travel, and Cylinder Pressure Rise. TN 1217, Feb. 1947.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr.; Scadron, Marvin D. and Colnar, Anthony: The NACA Mixture Analyzer and Its Application to Mixture-Distribution Measurement in Flight. TN 1238, March 1947.
- Manson, S. S. and Morgan, W. C.: Distribution of Bearing Reactions on a Rotating Shaft Supported on Multiple Journal Bearings. TN 1280, May 1947.
- Von Vietinghoff-Scheel, K.: Laboratory Report on the Investigation of the Flow Around Two Turbine-Blade Profiles Using the Interference Method. TM 1171, July 1947.
- Good, J. N. and Godfrey, Douglas: Changes Found on Run-In and Scuffed Surfaces of Steel, Chrome Plate, and Cast Iron. TN 1432, Oct. 1947.
- Valerino, Michael F. and Kaufman, Samuel J.: Cylinder-Temperature and Cooling-Air-Pressure Instrumentation for Air-Cooled-Engine Cooling Investigations. TN 1509, Jan. 1948.
- Huber, Paul W. and Kantrowitz, Arthur: A Device for Measuring Sonic Velocity and Compressor Mach Number. TN 1664, July 1948.

- Essig, Robert H.; Bohanon, H. R. and Gabriel, David S.: Jet Diffuser for Simulating Ram-Pressure Conditions on a Turbojet-Engine Static Test Stand. TN 1687, Aug. 1948.
- Livengood, James C.: Improvement of Accuracy of Balanced-Pressure Indicators and Development of an Indicator Calibrating Machine. TN 1896, June 1949.

PROPELLERS

(9.1.5)

- Warner, Edward P.; Norton, F. H. and Hebbert, C. M.: Design of Wind Tunnels and Wind Tunnel Propeller. Rept. 73, 1919.
- Norton, F. H. and Warner, Edward P.: Design of Wind Tunnels and Wind-Tunnel Propellers, II. Rept. 98, 1921.
- Reed, S. Albert: Air Reactions to Objects Moving at Rates Above the Velocity of Sound with Application to the Air Propeller. TM 168, Nov. 1922.
- Weick, Fred E. and Wood, Donald H.: The Twenty-Foot Propeller Research Tunnel of the National Advisory Committee for Aeronautics. Rept. 300, 1928.
- Weick, Fred E.: Determination of Propeller Deflection by Means of Static Load Tests on Models. TN 275, Jan. 1928.
- Stickle, George W.: Measurement of the Differential and Total Thrust and Torque of Six Full-Scale Adjustable-Pitch Propellers. Rept. 421, 1932.
- Theodorsen, T.: Propeller Vibrations and the Effect of the Centrifugal Force. TN 516, Feb. 1935.
- Panetti, M.: Experimental Apparatus for the Study of Propellers. TM 819, March 1937.
- Hartman, Edwin P. and Biermann, David: The Torsional and Bending Deflection of Full-Scale Aluminum-Alloy Propeller Blades Under Normal Operating Conditions. Rept. 644, 1938.
- Bailey, F. J., Jr. and Gustafson, F. B.: Observations in Flight of the Region of Stalled Flow over the Blades of an Autogiro Rotor. TN 741, Dec. 1939.
- Miller, Mason F.: Wind-Tunnel Vibration Tests of Dual-Rotating Propellers. ARR 3111 (WR L-405), Sept. 1943.

- Manson, S. S.: An Automatic Electrical Analyzer for 45° Strain-Rosette Data. TN 941, May 1944.
- Dingeldein, Richard C. and Schaefer, Raymond F.: High-Speed Photographs of a YR-4B Production Rotor Blade for Simulated Flight Conditions in the Langley Full-Scale Tunnel. MR L5C12c (WR L-631), March 1945.
- Pendley, Robert E.: Effect of Propeller-Axis Angle of Attack on Thrust Distribution over the Propeller Disk in Relation to Wake-Survey Measurement of Thrust. ARR L5J02b (WR L-517), Nov. 1945.
- Gardner, Clifford S. and LaHatte, James A., Jr.: Determination of Induced Velocity in Front of an Inclined Propeller by a Magnetic-Analogy Method. ARR L6A05b (WR L-154), Feb. 1946.
- Reid, Elliott G.: Wake Studies of Eight Model Propellers. TN 1040, July 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- Perkins, Porter J. and Millenson, Morton B.: An Electric Thrust Meter Suitable for Flight Investigation of Propellers. RM E9C17, May 1949.

MATERIALS

(9.1.6)

- Walen, E. Dean: The Structure of Airplane Fabrics. Rept. 36, 1919.
- Smith, W. H.: Airplane Dopes and Doping. Rept. 38, 1920.
- Edwards, Junius D. and Moore, Irwin L.: The Testing of Balloon Fabrics. Rept. 39, 1920.
- Weaver, E. R.; Berry, W. M. and Bohnson, V. L. - I; Weaver, E. R. and Gordon, B. D. - II; Gordon, B. D. - III: The Ferrosilicon Process for the Generation of Hydrogen. Rept. 40, 1920.
- Edwards, Junius David: Testing of Balloon Gas: Rept. 41, 1920.
- Preprint from Fifth Annual Report: Construction of Models for Tests in Wind Tunnels. Rept. 74, 1920.
- Hersey, M. D.: Diaphragms for Aeronautic Instruments. Rept. 165, 1923.

- Materials (Cont.)
- Stevens, F. W.: A Constant Pressure Bomb. Rept. 176, 1923.
- Peck, William C.: Dynamic and Flight Tests on Rubber-Cord and Oleo-Rubber-Disk Landing Gears for an F6C-4 Airplane. Rept. 366, 1930.
- Peck, William C. and Beard, Albert P.: Static, Drop, and Flight Tests on Musselman Type Airwheels. Rept. 381, 1931.
- Redmond, John C.: Rapid Chemical Test for the Identification of Chromium-Molybdenum Steel Aircraft Tubing. TN 411, March 1932.
- Aitchison, C. S.: Extension of Pack Method for Compressive Tests. TN 789, Dec. 1940.
- Spot Welding of Aluminum and Aluminum Alloys in the American Aircraft Industry. OCR Rept. 2, Dec. 1940.
- Von Hippel, Arthur R. and Dietz, A. G. H.: Curing of Resin-Wood Combinations by High-Frequency Heating. TN 874, Dec. 1942.
- Ramberg, Walter and Osgood, William R.: Description of Stress-Strain Curves by Three Parameters. TN 902, July 1943.
- Aitchison, C. S. and Miller, James A.: A Subpress for Compressive Tests. TN 912, Dec. 1943.
- Dutee, Francis J.; Phillips, Franklyn W. and Kemp, Richard H.: Operating Stresses in Aircraft-Engine Crankshafts and Connecting Rods. I Slip-Ring and Brush Combinations for Dynamic-Strain Measurements. MR E5C30 (WR E-187), March 1945.
- Kotanchik, Joseph N.; Woods, Walter and Weinberger, Robert A.: Investigation of Methods of Supporting Single-Thickness Specimens in a Fixture for Determination of Compressive Stress-Strain Curves. RB L5E15 (WR L-189), May 1945.
- Velikov, P. A.; Stchapov, N. P. and Lorenz, W. F.: Micromechanical Study of Metals. TM 1083, July 1945.
- Kittel, J. Howard: Table of Interplaner Spacings for Crystal-Structure Determinations by X-Ray Diffraction with Molybdenum, Copper, Cobalt, Iron and Chromium Radiations. TN 1000, Aug. 1945.

- Sachs, George; Smith, Charles S.; Lubahn, Jack D.; Davis, Gordon E. and Ebert, Lynn J.: Nondestructive Measurement of Residual and Enforced Stresses by Means of X-Ray Diffraction. II Some Applications to Aircraft Problems. TN 987, Nov. 1945.
- Miller, James A.: A Fixture for Compressive Tests of Thin Sheet Metal Between Lubricated Steel Guides. TN 1022, April 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- Crouse, W. A.; Caudill, D. C. and Reinhart, F. W.: Effect of Simulated Service Conditions on Plastics. TN 1240, July 1947.
- Ekstein, Hans and Siegel, Stanley: Limits of Precision in the Determination of Lattice Parameters and Stresses by the Debye-Scherrer Method. TN 1375, Oct. 1947.
- Campbell, William R.: Performance Tests of Wire Strain Gages. VI -Effect of Temperature on Calibration Factor and Gage Resistance. TN 1456, Jan. 1948.
- Campbell, William R.: Tests of Six Types of Bakelite-Bonded Wire Strain Gages. TN 1656, July 1948.

STRUCTURES

(9.1.7)

- Warner, E. P.: Static Testing and Proposed Standard Specifications. TN 6, July 1920.
- Aeronautics Staff, Construction Department, Navy Yard, Washington, D. C.: Hydrostatic Tests of an Airship Model. TN 87, March 1922.
- Tuckerman, L. B.: Water Model Tests for Semirigid Airships. Rept. 211, 1925.
- Rhode, Richard V. and Pearson, Henry A.: A Method for Computing Leading-Edge Loads. Rept. 413, 1931.
- Mathar, Josef: Determination of Inherent Stresses by Measuring Deformations of Drilled Holes. TM 702, March 1933.
- Oppel, G.: The Photoelastic Investigation of Three-Dimensional Stress and Strain Conditions. TM 824, April 1937.

- Aitchison, C.S. and Tuckerman, L.B.: The "Pack" Method for Compressive Tests of Thin Specimens of Materials Used in Thin-Wall Structures. Rept. 649, 1939.
- Hill, H. N.: A Semi-Graphical Method for Analyzing Strains Measured on Three or Four Gage Lines Intersecting at 45°. TN 709, May 1939.
- Weller, R. and Bussey, J. K.: Photoelastic Analysis of Three-Dimensional Stress Systems Using Scattered Light. TN 737, Nov. 1939.
- Müller, W.: New Equipment for Testing the Fatigue Strength of Riveted and Welded Joints. TM 947, July 1940.
- Müller, W.: Creep Strength of Stabilized Wrought-Aluminum Alloys. TM 960, Nov. 1940.
- Paul, D. A.; Howell, F. M. and Grieshaber, H. E.: Comparison of Stress-Strain Curves Obtained by Single-Thickness and Pack Methods. TN 819, Aug. 1941.
- Matthaes, K.: Strength Tests on Hulls and Floats. TM 1019, June 1942.
- Templin, R. L. and Fogwell, J. W.:
 Design of Tools for Press-Countersinking or Dimpling 0.040-Inch-Thick
 24S-T Sheet. TN 854, Aug. 1942.
- Lundquist, Eugene E. and Schwartz, Edward B.: The Critical Compression Load for a Universal Testing Machine when the Specimen Is Loaded Through Knife Edges. TN 860, Sept. 1942.
- Dow, Norris F.: The Analysis of Strains Indicated by Multiple-Strand Resistance-Type Wire Strain Gages Used as Rosettes. ARR (WR L-536), Jan. 1943.
- McPherson, A. E.: Adaptor for Measuring Principal Strains with Tuckerman Strain Gage. TN 898, June 1943.
- Lundquist, Eugene E.; Rossman, Carl A. and Houbolt, John C.: A Method for Determining the Column Curve from Tests of Columns with Equal Restraints Against Rotation on the Ends. TN 903, Aug. 1943.
- Manson, S. S.: Charts for Rapid Analysis of 45° Strain-Rosette Data. TN 940, May 1944.

- Manson, S. S.: An Automatic Electrical Analyzer for 45° Strain-Rosette Data. TN 941, May 1944.
- Goodier, J. N. and Thomson, W. T.: Applicability of Similarity Principles to Structural Models. TN 933, July 1944.
- Campbell, William R.: Performance Tests of Wire Strain Gages. I - Calibration Factors in Tension. TN 954, Nov. 1944.
- Campbell, William R.: Performance Tests of Wire Strain Gages. II - Calibration Factors in Compression. TN 978, Sept. 1945.
- Campbell, William R.: Performance Tests of Wire Strain Gages. III - Calibrations at High Tensile Strains. TN 997, Dec. 1945.
- Miller, James A.: A Fixture for Compressive Tests of Thin Sheet Metal Between Lubricated Steel Guides. TN 1022, April 1946.
- Campbell, William R.: Performance Tests of Wire Strain Gages. IV Axial and Transverse Sensitivities. TN 1042, June 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- McPherson, A. E.: Device for Measuring Principal Curvatures and Principal Strains on a Nearly Plane Surface. TN 1137, Feb. 1947.
- Ross, Robert D.: An Electrical Computer for the Solution of Shear-Lag and Bolted-Joint Problems. TN 1281, May 1947.
- Campbell, W. R. and Medbery, A. F.:
 Performance Tests of Wire Strain
 Gages. V Error in Indicated Bending
 Strains in Thin Sheet Metal Due to
 Thickness and Rigidity of Gage.
 TN 1318, July 1947.
- Campbell, William R.: Performance Tests of Wire Strain Gages. VI -Effect of Temperature on Calibration Factor and Gage Resistance. TN 1456, Jan. 1948.
- Campbell, William R.: Tests of Six Types of Bakelite-Bonded Wire Strain Gages. TN 1656, July 1948.

Techniques

(9.2)

- Edwards, Junius David: Testing of Balloon Gas. Rept. 41, 1920.
- Norton, F. H.: The Art of Writing Scientific Reports. TM 7, Dec. 1920.
- Norton, F. H.: The Drawing of Experimental Curves. TM 29, July 1921.
- Kempe, Erich: Establishment of Aviation Schools. TM 49, Nov. 1921.
- Bouche, Henri: Aeronautic Instruction in Germany. TM 51, Nov. 1921.
- Katzmayr, R. and Kirste, L.: The Aerodynamical Laboratory of the Vienna Technical High School. TM 61, Feb. 1922.
- Toussaint, A.: Evolution of Modern Aviation and Experimental and Technical Researches in Aerodynamic Laboratories. TM 76, April 1922.
- Roper, Capt.: Aerial Convention of October 13, 1919. TM 94, May 1922.
- Anon: Resume of the Activities of the Aeronautical Experimental Institute, Rome, During the Months of May, June, July, and August, 1921. TM 116, July 1922.
- Jubera: Aerodynamic Laboratory at Cuatro Vientos. TM 134, Sept. 1922.
- Warner, Edward P.: Training of Aeronautical Engineers. TM 149, Oct. 1922.
- Lesage, André: Technical Section of Aeronautics. TM 187, Feb. 1923.
- Anon: Aerial Photography. Obtaining a True Perspective. TM 200, April 1923.
- Zahm, A. F.: The Vector Ruling Protractor. TM 251, March 1924.
- Dufour, A.: The Cathode Oscillograph for the Study of Low, Medium and High Frequencies. TM 255, April 1924.
- Anon: The Aerodynamic Laboratory of the Belgian "Service Technique de L'Aeronautique." TM 292, Dec. 1924.
- Eaton, H. N. and Buckingham, C. T.: Nonmetallic Diaphragms for Instruments. Rept. 206, 1925.

- Anon.: The Belgian Aerotechnical Laboratory at Rhode-Saint-Genese. From Bulletin of the TSA (Jan. 1926). TM 377, Sept. 1926.
- Digest of Some of the Speeches Made at the Fifteenth Regular Meeting of the "Wissenschaftliche Gesellschaft fur Luftfahrt." (July 17, 1926, in Dusseldorf, Germany. From "Zeitschrift fur Flugtechnik und Motorluftschiffahrt," July 14, 1926.) TM 379, Sept. 1926.
- Caracciolo, Moreno: Aerodynamic Laboratory at Cuatro Vientos. TM 414, June 1927.
- Anon.: The Exhibition of the D. V. L. (Deutsche Versuchsanstalt fur Luftfahrt) at the International Air Exhibition, Berlin, October, 1928. MP 22, Jan. 1929.
- Karner, L. and Ackeret, J.: Aeronautical Education and Research at the Swiss Institute of Technology in Zurich. TM 616, April 1931.
- Boerlage, G. D.: Detonation and Autoignition. Some Considerations on Methods of Determination. TM 843, Dec. 1937.
- Penzig, F.: Temperature-Indicating Paints. TM 905, Aug. 1939.
- Gohlke, Werner: Piezoelectric Instruments of High Natural Frequency Vibration Characteristics and Protection Against Interference by Mass Forces. TM 1040, Feb. 1943.
- Young, Pearl I.: Style Manual for Engineering Authors. Style Manual, May 1943.
- Holm, Ragnar: Determination of the Actual Contact Surface of a Brush Contact. TM 1071, Aug. 1944.
- Swanson, Robert S. and Crandall, Stewart M.: An Electromagnetic-Analogy Method of Solving Lifting-Surface-Theory Problems. ARR L5D23 (WR L-120), May 1945.
- Cleaves, Alden P. and Carver, Mildred S.: A Spectrophotometric Method for Identification and Estimation of Alkylnaphthalenic-Type Hydrocarbons in Kerosene. TN 1243, April 1947.

- Gracey, William: The Experimental Determination of the Moments of Inertia of Airplanes by a Simplified Compound-Pendulum Method. TN 1629, June 1948.
- Boelter, L. M. K.; Dempster, E. R.; Bromberg, R. and Gier, J. T.: An Investigation of Aircraft Heaters. XXVI - Development of a Sensitive Plated-Type Thermopile for Measuring Radiation. TN 1450, July 1948.
- Phillips, William H.: Theoretical Analysis of Oscillations of a Towed Cable. TN 1796, Jan. 1949.
- Meixner, J.: Lame's Wave Functions of the Ellipsoid of Revolution. TM 1224, April 1949.
- Zobel, Th.: Flow Measurement by Means of Light Interferences. TM 1253, Aug.

CORRECTIONS

(9.2.1)

- Prandtl, L.: Theory of Lifting Surfaces. Part I. TN 9, July 1920.
- Zahm, A. F.: Horizontal Buoyancy in Wind Tunnels. TN 23, Nov. 1920.
- Davidson, W. E. and Bacon, D. L.: The Determination of the Effective Resistance of a Spindle Supporting a Model Aerofoil. TN 37, Jan. 1921.
- Tenani, Mario: ABACUS for the Reduction of English Measures to the Metric System and Vice Versa. TM 30, July 1921.
- Diehl, Walter S.: Simple Formula for Estimating Airplane Ceilings. TN 103, June 1922.
- Wieselsberger, C .: Effect of Method of Suspending Models in Airstream on Resulting Measurements. TM 169, Nov. 1922.
- Bacon, David L.: Model Supports and Their Effect on the Results of Wind Tunnel Tests. TN 130, Feb. 1923.
- Wieselsberger, C .: Wind Tunnel Tests of Correction Formula for Wings of Large Span. TM 263, May 1924.
- From Report A 58 of the "Rijks-Studiedienst voor de Luchtvaart": Nomogram for Correcting Drag and Angle of Attack of an Airfoil Model in an Air Stream of Finite Diameter. TM 293, Dec. 1924.

- Diehl, Walter S. and Lesley, E. P.: The Reduction of Airplane Flight Test Data to Standard Atmosphere Conditions. Rept. 216, 1925.
- Hugeunard, E .: High Velocity Wind Tunnels. (Their Application to Ballistics, Aerodynamics and Aeronautics.) TM 318, June 1925.
- Munk, Max M.: Determination and Classification of the Aerodynamic Properties of Wing Sections. TN 227, Sept. 1925.
- Kerneis, Jean: Wire Suspensions in Wind Tunnel Experiments. TM 342, Dec. 1925.
- Higgins, George J.: The Effect of the Walls in Closed Type Wind Tunnels. Rept. 275, 1927.
- Smith, R. H.: Method of Correcting Wind Tunnel Data for Omitted Parts of Airplane Models. TN 254, Jan. 1927.
- Rizzo, Frank: Precision of Wing Sections and Consequent Aerodynamic Effects. TN 255, Jan. 1927.
- Higgins, George J.: Wall Interference in Closed Type Wind Tunnels. TN 256, March 1927.
- Knight, Montgomery and Harris, Thomas A.: Experimental Determination of Jet Boundary Corrections for Airfoil Tests in Four Open Wind-Tunnel Jets of Different Shapes. Rept. 361, 1930.
- Theodorsen, Theodore: The Theory of Wind-Tunnel Wall Interference. Rept. 410, 1931.
- Gough, Melvin N .: The Variation in Pressure in the Cabin of an Airplane in Flight. TN 368, March 1931.
- Jacobs, Eastman N. and Abbott, Ira H.: The NACA Variable-Density Wind Tunnel. Rept. 416, 1932.
- Theodorsen, Theodore: Interference on an Airfoil of Finite Span in an Open Rectangular Wind Tunnel. Rept. 461, 1933.
- Stuper, J.: An Airfoil Spanning an Open Jet. TM 723, Sept. 1933.
- Theodorsen, Theodore and Silverstein, Abe: Experimental Verification of the Theory of Wind-Tunnel Boundary Interference. Rept. 478, 1934.
- Van Schliestett, George: Experimental Verification of Theodorsen's Theoretical Jet-Boundary Correction Factors. TN 506, Oct. 1934.

Corrections (Cont.)

- Brombacher, W. G.: Altitude Pressure Tables for Calibrating Altimeters and Computing Altitudes Based on the United States Standard Atmosphere. Rept. 538, 1935.
- Silverstein, Abe and White, James A.:
 Wind-Tunnel Interference with Particular Reference to Off-Center
 Positions of the Wing and to the
 Downwash at the Tail. Rept. 547,
 1935.
- Stuper, J.: Contribution to the Problem of Airfoils Spanning a Free Jet. TM 796, June 1936.
- Lotz, Irmgard: Correction of Downwash in Wind Tunnels of Circular and Elliptic Sections. TM 801, July 1936.
- Dryden, Hugh L.; Schubauer, G. B.; Mock, W. C., Jr. and Skramstad, H. K.: Measurements of Intensity and Scale of Wind-Tunnel Turbulence and Their Relation to the Critical Reynolds Number of Spheres. Rept. 581, 1937.
- Bamber, M. J. and House, R. O.: Spinning Characteristics of the XN2Y-1 Airplane Obtained from the Spinning Balance and Compared with Results from the Spinning Tunnel and from Flight Tests. Rept. 607, 1937.
- Silverstein, Abe and Katzoff, S.: Experimental Investigation of Wind-Tunnel Interference on the Downwash Behind an Airfoil. Rept. 609, 1937.
- Jacobs, Eastman N.: Correction of Profile-Drag Results from the Variable-Density Tunnel and the Effect on the Choice of Wing-Section Thickness. ACR, March 1938.
- Danielzig, Helmut: Behavior of Static Pressure Heads at High Speeds. TM 865, June 1938.
- Jacobs, Eastman N. and Abbott, Ira H.: Airfoil Section Data Obtained in the NACA Variable-Density Tunnel as Affected by Support Interference and Other Corrections. Rept. 669, 1939.
- Walchner, O.: The Effect of Compressibility on the Pressure Reading of a Prandtl Pitot Tube at Subsonic Flow Velocity. TM 917, Nov. 1939.
- Seidman, Oscar and McAvoy, William H.: Spin Tests of a Low-Wing Monoplane in Flight and in the Free-Spinning Wind Tunnel. TN 769, July 1940.
- Van der Maas, H. J. and Wynia, S.: Corrections on the Thermometer Reading in an Air Stream. TM 956, Oct. 1940.

- Gracey, William: The Additional-Mass Effect of Plates as Determined by Experiments. Rept. 707, 1941.
- Weidemann, Hans: Inertia of Dynamic Pressure Arrays. TM 998, Dec. 1941.
- Swanson, Robert S. and Schuldenfrei, Marvin J.: Jet-Boundary Corrections to the Downwash Behind Powered Models in Rectangular Wind Tunnels with Numerical Values for 7- by 10-Foot Closed Wind Tunnels. ARR (WR L-711), Aug. 1942.
- Hootman, James A.: A Method for the Dynamic Calibration of Accelerometers. MP 47, March 1942.
- Golden, Jacob: The Effect of Large Angles of Yaw on the Accuracy of Wing-Tip Yawmeters. RB, Sept. 1942.
- Hantzsche, W. and Wendt, H.: The Compressible Potential Flow Past Elliptical Symmetrical Cylinders at Zero Angle of Attack and with No Circulation. TM 1030, Oct. 1942.
- Sweberg, Harold H.: Full-Scale Tunnel Investigation of the Control and Stability of a Twin-Engine Monoplane with Propellers Operating. ARR (WR L-425), Nov. 1942.
- Swanson, Robert S. and Toll, Thomas A.: Jet-Boundary Corrections for Reflection-Plane Models in Rectangular Wind Tunnels. Rept. 770, 1943.
- Dow, Norris F.: The Analysis of Strains Indicated by Multiple-Strand Resistance-Type Wire Strain Gages Used as Rosettes. ARR (WR L-536), Jan. 1943.
- Swanson, Robert S.: Jet-Boundary Corrections to a Yawed Model in a Closed Rectangular Wind Tunnel. ARR (WR L-603), Feb. 1943.
- Nielsen, Jack N.: Effect of Turbulence on Air-Flow Measurements Behind Orifice Plates. ARR 3G30 (WR L-274), July 1943.
- Corrsin, Stanley: Investigation of Flow in an Axially Symmetrical Heated Jet of Air. ACR 3L23 (WR W-94), Dec. 1943.
- Allen, H. Julian and Vincenti, Walter G.: Wall Interference in a Two-Dimensional Flow Wind Tunnel with Consideration of the Effect of Compressibility. Rept. 782, 1944.
- Katzoff, S. and Finn, Robert S.: Determination of Jet-Boundary Corrections to Cowling-Flap-Outlet Pressures by an Electrical Analogy Method. ARR 4B23 (WR L-240), Feb. 1944.

Corrections (Cont.)

- Lindsey, W. F .: Effect of Mach Number on Position Error as Applied to a Pitot-Static Tube Located 0.55 Chord Ahead of an Airplane Wing. CB L4E29 (WR L-75), May 1944.
- Swanson, Robert S. and Gillis, Clarence L.: Wind-Tunnel Calibration and Correction Procedures for Three-Dimensional Models. ARR L4E31 (WR L-1), Oct. 1944.
- Tani, Itiro and Sanuki, Matao: The Wall Interference of a Wind Tunnel of Ellip-tic Cross Section. TM 1075, Nov. 1944.
- Byrne, Robert W.: Experimental Construction Effects in High-Speed Wind Tunnels. ACR L4L07a (WR L-74), Dec. 1944.
- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Graham, Donald J .: Tunnel-Wall Corrections to Rolling and Yawing-Moments Due to Aileron Deflection in Closed Rectangular Wind Tunnels. ARR 4F21 (WR A-14), Jan. 1945.
- Ferri, Antonio: Completed Tabulation in the United States of Tests of 24 Airfoils at High Mach Numbers (Derived from Interrupted Work at Guidonia, Italy in the 1.31- by 1.74-Foot High-Speed Tunnel). ACR L5E21 (WR L-143), June 1945.
- Gillis, Clarence L.; Polhamus, Edward C. and Gray, Joseph L., Jr.: Charts for Determining Jet-Boundary Corrections for Complete Models in 7- by 10-Foot Closed Rectangular Wind Tunnels. ARR L5G31 (WR L-123), Sept. 1945.
- Warfield, Calvin N. and Kenimer, Robert L.: An Infrared Cloud Indicator. I -Analysis of Infrared-Radiation Exchange with Tables and Chart for Calibration of the Cloud Indicator. ACR L5104 (WR L-18), Nov. 1945.
- Sivells, James C. and Deters, Owen J.: Jet-Boundary and Plan-Form Corrections for Partial-Span Models with Reflection Plane, End Plate, or No End Plate in a Closed Circular Wind Tunnel. Rept. 843, 1946.
- Vincenti, Walter G. and Graham, Donald J .: The Effect of Wall Interference Upon the Aerodynamic Characteristics of an Airfoil Spanning a Closed Throat Circular Wind Tunnel. Rept. 849, 1946.
- Lindsey, W. F.: Calibrations of Service Pitot Tubes in the Langley 24-Inch High Speed Tunnel. MR L6A08 (WR L-580), Feb. 1946.

- Zalovcik, John A. and Wood, Clotaire: Static-Pressure Error of an Airspeed Installation on an Airplane in High-Speed Dives and Pull-Outs. RB L5K29a (WR L-43), Feb. 1946.
- Wright, Ray H. and Donaldson, Coleman duP.: Comparison of Two-Dimensional Air Flows About an NACA 0012 Airfoil of 1-Inch Chord at Zero Lift in Open and Closed 3-Inch Jets and Corrections for Jet-Boundary Interference. TN 1055, May 1946.
- Von Baranoff, A.: Tunnel Correction for Compressible Subsonic Flow. TM 1162, July 1947.
- Ludwig, H.: Drag Corrections in High Speed Wind Tunnels. TM 1163, July
- Johnson, Daniel P.: Calibration of Altimeters Under Pressure Conditions Simulating Dives and Climbs. TN 1562, March 1948.
- Huston, Wilber B .: Accuracy of Airspeed Measurements and Flight Calibration Procedures. TN 1605, June 1948.
- Tucker, M. and Rousso, M. D.: Experimental Investigation of the Jet-Boundary Constriction Correction for a Model Spanning a Closed Circular Tunnel. TN 1638, June 1948.
- Davis, Don D., Jr. and Sweberg, Harold H .: Investigation of Some Factors Affecting Comparisons of Wind-Tunnel and Flight Measurements of Maximum Lift Coefficients for a Fighter-Type Airplane. TN 1639, June 1948.
- Perl, W. and Moses, H. E.: Velocity Distributions on Symmetrical Airfoils in Closed Tunnels by Conformal Mapping. TN 1642, June 1948.
- Emmons, Howard W .: Flow of a Compressible Fluid past a Symmetrical Airfoil in a Wind Tunnel and in Free Air. TN 1746, Nov. 1948.
- Katzoff, S. and Hannah, Margery E .: Calculation of Tunnel-Induced Upwash Velocities for Swept and Yawed Wings. TN 1748, Nov. 1948.
- Polhamus, Edward C .: Jet-Boundary-Induced-Upwash Velocities for Swept Reflection-Plane Models Mounted Vertically in 7- by 10-Foot, Closed, Rectangular Wind Tunnels. TN 1752, Nov. 1948.
- Gracey, William: Position Errors of the Service Airspeed Installations of 10 Airplanes. TN 1892, June 1949.

Corrections (Cont.)

Moses, H. E.: Velocity Distributions on Arbitrary Airfoils in Closed Tunnels by Conformal Mapping. TN 1899, June 1949.

AERODYNAMICS

(9.2.2)

- Norton, F. H.: The Photographic Recording of Small Motions. TN 22, Nov. 1920.
- Norton, F. H.: Design of Recording Wind Tunnel Balances. TN 30, Dec. 1920.
- Hersey, Mayo D.; Hunt, Franklin L. and Eaton, Herbert N.: The Altitude Effect on Air Speed Indicators. Rept. 110, 1921.
- Munk, Max: On a New Type of Wind Tunnel. TN 60, May 1921.
- Munk, Max: Absolute Coefficients and the Graphical Representation of Aerofoil Characteristics. TN 58, June 1921.
- Margoulis, W.: A New Method of Testing Models in Wind Tunnels. TN 52, Aug. 1921.
- Von Sanden, H.: Graphic Diagram for Aeronautic Calculations. MP 5, Sept. 1921.
- Zahm, A. F.: The Six-Component Wind Balance. Rept. 146, 1922.
- Bacon, D. L.: Langley Field Wind Tunnel Apparatus. TN 65, Oct. 1921.
- Norton, F. H.: A Preliminary Investigation of a New Method for Testing Aerofoils in Free Flight. TN 77, Jan. 1922.
- Diehl, Walter S.: Notes on the Construction and Testing of Model Airplanes. TN 82, Jan. 1922.
- Diehl, W. S., Bureau of Aeronautics, U.S.N.: Surface Area Coefficients for Airship Envelopes. TN 86, Feb. 1922.
- Robert, Lieut. Col.: Applying the Results of Experiments on Small Models in the Wind Tunnel to the Calculation of Full-Sized Aircraft. TM 84, April 1922.
- Constantin, M. Louis: Wind Vane with Various Applications. TM 137, Sept. 1922.
- Espenlaub, Lippisch: Problem of Glider Models. TM 136, Sept. 1922.
- Brown, W. G.: The Synchronization of NACA Flight Records. TN 117, Oct. 1922.

- Eiffel, G.: Method Rendering It Possible, in Testing Airplane Wing Models at the Eiffel Laboratory, To Obtain Comparable Polars, Whether the Supports Are Attached to the Upper or Lower Side of Model. TM 156, Nov. 1922.
- Brown, W. G.: Measuring an Airplane's True Speed in Flight Testing. TN 135, April 1923.
- Lepere, M.: Trend To Be Given Aerodynamical Research and Experiment. TM 209, June 1923.
- Heidelberg, V. and Holzel, A.: Speed Measurements Made by Division "A" of the Airplane Directorate (Flugzeugmeisterei), Subdivision for Flight Experiments. TN 147, July 1923.
- Toussaint, A.: Lecture on Aerodynamics. TM 227, Sept. 1923.
- Reid, Elliott G.: Standardization Tests of NACA No. 1 Wind Tunnel. Rept. 195, 1924.
- Robert, Lieut. Col.: Methods of Experimentation with Models and Utilization of Results. TM 247, Feb. 1924.
- Wieselsberger, C.: Air Flow-Experiments. TM 260, May 1924.
- Dollfuss, Charles: Historical Notes on Aerodynamic Research. TM 273, Aug. 1924.
- Munk, Max M.: Preliminary Wing Model Tests in the Variable Density Wind Tunnel of the National Advisory Committee for Aeronautics. Rept. 217, 1925.
- Kumbruch, H.: Pitot-Static Tubes for Determining the Velocity of Air. TM 303, Feb. 1925.
- Freeman, R. G.: Air Flow Investigation for Location of Angle of Attack Head on a JN4h Airplane. TN 222, Aug. 1925.
- Green, Maurice W.: Determination of the Lift and Drag Characteristics of an Airplane in Flight. TN 223, Aug. 1925.
- Reid, H. J. E. and Kirchner, Otto E.: An Altitude Chamber for the Study and Calibration of Aeronautical Instruments. TN 229, Nov. 1925.
- Taylor, D. W.: Some Aspects of the Comparison of Model and Full-Scale Tests. Rept. 219, 1926.
- Munk, Max M.: The Spacing of Orifices for the Measurement of Pressure Distribution. TN 230, Jan. 1926.

- Von Baumhauer, A. G.: Photographic Time Studies of Airplane Paths. TM 345, Jan. 1926.
- Koppe, Heinrich: Flight Tests on Airplanes. TM 359, April 1926.
- Prandtl, L.: Tasks of Air Flow Research. TM 365, June 1926.
- Hemke, Paul E.: Influence of the Orifice on Measured Pressures. TN 250, Nov. 1926.
- Shoemaker, James M.: Resistance of a Fifteen-Centimeter Disk. TN 252, Dec. 1926.
- Knight, Montgomery: Wind Tunnel Standardization Disk Drag. TN 253, Dec. 1926.
- Carroll, Thomas: A Comparison of the Take-Off and Landing Characteristics of a Number of Service Airplanes. Rept. 249, 1927.
- Hemke, Paul E.: The Measurement of Pressure Through Tubes in Pressure Distribution Tests. Rept. 270, 1927.
- Raethjen, P. and Knott, H.: Kinetographic Determination of Airplane Flight Characteristics. TM 409, April 1927.
- Weick, Fred E.: Study of Open Jet Wind Tunnel Cones. TN 260, Aug. 1927.
- Green, M. W.: Measurement of the Moments of Inertia of Full Scale Airplanes. TN 265, Sept. 1927.
- Heim, A. L.: Special Propeller Protractor. TN 272, Jan. 1928.
- Zahm, A. F.: An Automatic Speed Control for Wind Tunnels. TN 278, Feb. 1928.
- Carroll, Thomas and McAvoy, William H.: The Variation in Pressures in the Cockpit of an Airplane in Flight. TN 300, Nov. 1928.
- Dryden, H. L. and Kuethe, A. M.: The Measurement of Fluctuations of Air Speed by the Hot-Wire Anemometer. Rept. 320, 1929.
- Spieweck, Bruno: Photogrammetric Take-Off and Landing Measurements. TM 496, Jan. 1929.
- Katzmayr, R.: Aeromechanical Experimentation (Wind Tunnel Tests). TM 508, April 1929.
- Seewald, F.: Force Measurements on Airplanes. TM 519, June 1929.

- Rebuffet, P.: The Electrodynamometric Balance of the Small Wind Tunnel of the French Service of Aeronautical Research. TM 556, March 1930.
- Schrenk, Martin: Measurement of Profile Drag on an Airplane in Flight by the Momentum Method. Part I. TM 557, March 1930.
- Schrenk, Martin: Measurement of Profile Drag on an Airplane in Flight by the Momentum Method. Part II. TM 558, March 1930.
- Jacobs, Eastman N. and Abbott, Ira H.: Experiments with a Model Water Tunnel. TN 358, Dec. 1930.
- Soulé, Hartley A. and Scudder, Nathan F.: A Method of Flight Measurement of Spins. Rept. 377, 1931.
- Noyes, Richard W.: An Integrating Manometer for use in Wind Tunnel Pressure Distribution Measurements. TN 377, May 1931.
- Taylor, C. Fayette: A Suggested Method for Measuring Turbulence. TN 380, June 1931.
- Peters, H.: Effect of Viscosity in Speed Measurements with Double-Throat Venturi Tubes. TM 633, Aug. 1931.
- From Flug, Nos. 7 and 8, July-August, 1931: Dynamic Wind-Tunnel Control. MP 30, Oct. 1931.
- Stickle, George W.: Measurement of the Differential and Total Thrust and Torque of Six Full-Scale Adjustable-Pitch Propellers. Rept. 421, 1932.
- Gough, Melvin N. and Johnson, Ernest: Methods of Visually Determining the Air Flow around Airplanes. TN 425, July 1932.
- Krisam, Dr. F.: Speed and Pressure Recording in Three-Dimensional Flow. TM 688, Oct. 1932.
- Stack, John: The NACA High-Speed Wind Tunnel and Tests of Six Propeller Sections. Rept. 463, 1933.
- Soulé, Hartley A. and Miller, Marvel P.: The Experimental Determination of the Moments of Inertia of Airplanes. Rept. 467, 1933.
- Georgii, Walter: Future Problems of Soaring Flight, and Eisenlohr, Roland: Systematic Observations of Local Cumuli. TM 709, May 1933.
- Prandtl, L.: Attaining a Steady Air Stream in Wind Tunnels. TM 726, Oct. 1933.

- Rhode, Richard V.: The Influence of Tip Shape on the Wing Load Distribution as Determined by Flight Tests. Rept. 500, 1934.
- Brevoort, M. J. and Joyner, U. T.: Experimental Investigation of the Robinson-Type Cup Anemometer. Rept. 513, 1935.
- Schubauer, G. B.: A Turbulence Indicator Utilizing the Diffusion of Heat. Rept. 524, 1935.
- Zimmerman, C. H.: Preliminary Tests in the NACA Free-Spinning Wind Tunnel. Rept. 557, 1936.
- Platt, Robert C.: Turbulence Factors of NACA Wind Tunnels as Determined by Sphere Tests. Rept. 558, 1936.
- Jones, Robert T.: A Simplified Application of the Method of Operators to the Calculation of Disturbed Motions of an Airplane. Rept. 560, 1936.
- Jacobs, Eastman N.: Methods Employed in America for the Experimental Investigation of Aerodynamic Phenomena at High Speeds. MP 42, March 1936.
- Kramer, M.: The 5-by 7-Meter Wind Tunnel of the DVL. TM 788, March 1936.
- Mock, W. C., Jr.: Alternating-Current Equipment for the Measurement of Fluctuations of Air Speed in Turbulent Flow. Rept. 598, 1937.
- Brevoort, Maurice J.: Smoke Generator for Purpose of Making Air Flow Visible. MP 43, April 1937.
- Gourjienko, G. A.: Method of Curved Models and Its Application to the Study of Curvilinear Flight of Airships. Part I. TM 829, June 1937.
- Gourjienko, G. A.: Method of Curved Models and Its Application to the Study of Curvilinear Flight of Airships. Part II. TM 830, June 1937.
- Thompson, F. L.: The Measurement of Air Speed of Airplanes. TN 616, Oct. 1937.
- Soulé, H. A. and Hootman, James A.: Flight Tests of an Airplane Showing Dependence of the Maximum Lift Coefficient on the Test Conditions. TN 622, Nov. 1937.
- Kramer, M. and Krüger, K.B.: A New Spinning-Test Method. TM 859, April 1938.

- Danielzig, Helmut: Behavior of Static Pressure Heads at High Speeds. TM 865, June 1938.
- Schlichting, H.: The Dornier Wind Tunnel. TM 868, June 1938.
- Abbott, Ira H. and Sherman, Albert: Flow Observations with Tufts and Lampblack of the Stalling of Four Typical Airfoil Sections in the NACA Variable-Density Tunnel. TN 672, Oct. 1938.
- Seidman, Oscar and Neihouse, A. I.: Comparison of Free-Spinning Wind-Tunnel Results with Corresponding Full-Scale Spin Results. MR (WR L-737), Dec. 1938.
- Goett, Harry J.: Experimental Investigation of the Momentum Method for Determining Profile Drag. Rept. 660, 1939.
- Goett, Harry J. and Bicknell, Joseph: Comparison of Profile-Drag and Boundary-Layer Measurements Obtained in Flight and in the Full-Scale Wind Tunnel. TN 693, March 1939.
- Jacobs, Eastman N.: Preliminary Report on Laminar-Flow Airfoils and New Methods Adopted for Airfoil and Boundary-Layer Investigations. ACR (WR L-345), June 1939.
- Ferri, Antonio: Investigation and Experiments in the Guidonia Supersonic Wind Tunnel. TM 901, July 1939.
- Sherman, Albert: A Simple Method of Obtaining Span Load Distributions. TN 732, Oct. 1939.
- Kiel, Georg: Measurement of the True Dynamic and Static Pressures in Flight. TM 913, Oct. 1939.
- Walchner, O.: The Effect of Compressibility on the Pressure Reading of a Prandtl Pitot Tube at Subsonic Flow Velocity. TM 917, Nov. 1939.
- Pittoni, Mario: The Breda Wind Tunnel. TM 922, Dec. 1939.
- Klemperer, W. B.: Measurement of the Forces Acting on Gliders in Towed Flight. TN 753, Feb. 1940.
- Gracey, William: The Additional-Mass Effect of Plates as Determined by Experiments. Rept. 707, 1941.
- Wimmer, W.: Stagnation Temperature Recording. TM 967, Jan. 1941.
- Eckert, B.: Experiences with Flow-Direction Instruments. TM 969, March 1941.

- Shortal, Joseph A. and Osterhout, Clayton J.: Preliminary Stability and Control Tests in the NACA Free-Flight Wind Tunnel and Correlation with Full-Scale Flight Tests. TN 810, June 1941.
- Stack, John: Compressibility Effects in Aeronautical Engineering. ACR, Aug. 1941.
- Recant, I. G.: Plate Method of Ground Representation for Wind-Tunnel Determination of Elevator Effectiveness in Landing. TN 823, Sept. 1941.
- Ferrari, Carlo: Electrical Equipment for the Experimental Study of the Dynamics of Fluids. TM 1006, March 1942.
- Lindsey, W. F.: Calibration of Three Temperature Probes and a Pressure Probe at High Speeds. ARR (WR L-273), April 1942.
- Recant, Isidore G. and Swanson, Robert S.:
 Determination of the Stability and Control Characteristics of Airplanes from Tests of Powered Models. ARR (WR L-710), July 1942.
- Schwabe, M.: Pressure Distribution in Nonuniform Two-Dimensional Flow. TM 1039, Jan. 1943.
- Davis, Wallace F.: Comparison of Various Methods for Computing Drag from Wake Surveys. ARR (WR W-4), Jan. 1943.
- Wetmore, J. W.: NACA Apparatus and Methods for Take-Off and Landing Measurements. CB, Jan. 1943.
- Corson, Blake W., Jr.: The Belt Method for Measuring Pressure Distribution. RB (WR L-244), Feb. 1943.
- Johnson, Harold I.: NACA Procedure for Flight Tests of Aileron Characteristics of Airplanes. RB 3G24 (WR L-265), July 1943.
- Smith, Norman F.: NACA Mach Number Indicator for Use in High-Speed Tunnels. ACR 3G31 (WR L-423), July 1943.
- Gelbart, Abe: On a Function-Theory Method for Obtaining Potential-Flow Patterns of a Compressible Fluid. ARR 3G27 (WR L-460), July 1943.
- Nielsen, Jack N.: Effect of Turbulence on Air-Flow Measurements Behind Orifice Plates. ARR 3G30 (WR L-274), July 1943.
- Schuldenfrei, Marvin: Some Notes on the Determination of the Stick-Fixed Neutral Point from Wind-Tunnel Data. RB 3I20 (WR L-344), Sept. 1943.

- Allen, H. Julian and Vincenti, Walter G.: Wall Interference in a Two-Dimensional-Flow Wind Tunnel, with Consideration of the Effect of Compressibility. Rept. 782, 1944.
- Theodorsen, Theodore and Regier, Arthur: Experiments on Drag of Revolving Disks, Cylinders and Streamline Rods at High Speeds. Rept. 793, 1944.
- Boshar, John: The Determination of Span Load Distribtuion at High Speeds by Use of High-Speed Wind-Tunnel Section Data. ACR 4B22 (WR L-436), Feb. 1944.
- Katzoff, S. and Finn, Robert S.: Determination of Jet-Boundary Corrections to Cowling-Flap-Outlet Pressures by an Electrical Analogy Method. ARR 4B23 (WR L-240), Feb. 1944.
- Edwards, Howard B.: Wire-Strain-Gage Hinge-Moment Indicators for Use in Tests of Airplane Models. CB L4D15, April 1944.
- Goodier, J. N. and Thomson, W. T.: Applicability of Similarity Principles to Structural Models. TN 933, July 1944.
- Swanson, Robert S. and Gillis, Clarence L.: Wind-Tunnel Calibration and Correction Procedures for Three-Dimensional Models. ARR L4E31 (WR L-1), Oct. 1944.
- Zalovcik, John A. and Daum, Fred L.: Flight Investigation at High Mach Numbers of Several Methods of Measuring Static Pressure on an Airplane Wing. RB L4H10a (WR L-90), Nov. 1944.
- Corrsin, Stanley: Investigation of the Behavior of Parallel Two-Dimensional Air Jets. ACR 4H24 (WR W-90), Nov. 1944.
- Stability and Control Section, Flight Research Division: Charts Showing Stability and Control Characteristics of Airplanes in Flight. MR L4L26 (WR L-706), Dec. 1944.
- Yegorov, B. N.: New Method of Determining the Polar Curve of an Airplane in Flight. TM 1076, March 1945.
- Delany, Noel K. and Kauffman, William M.:
 Correlation of Wind-Tunnel Predictions
 with Flight Tests of a Twin-Engine
 Patrol Airplane. I LongitudinalStability and -Control Characteristics.
 MR A5D04 (WR A-86), April 1945.
- Humphreys, Milton D.: Effects of Compressibility and Large Angles of Yaw on Pressure Indicated by a Total-Pressure Tube. RB L5C30 (WR L-77), April 1945.

- Swanson, Robert S. and Crandall, Stewart M.: An Electromagnetic-Analogy Method of Solving Lifting-Surface-Theory Problems. ARR L5D23 (WR L-120), May 1945.
- Hamermesh, Bernard; Reines, Frederick and Korff, Serge A.: A Photoelectric Hygrometer. TN 980, May 1945.
- Gasich, Welko E. and Clousing, Lawrence A.: Flight Investigation of the Variation of Drag Coefficient with Mach Number for the Bell P-39N-1 Airplane. ACR 5D04 (WR A-61), May 1945.
- Gilruth, R. R. and Wetmore, J. W.: Preliminary Tests of Several Airfoil Models in the Transonic Speed Range. ACR L5E08, May 1945.
- Skoog, Richard B.: A Comparison of Two Flight-Test Procedures for the Determination of Aileron Control Capabilities of an Airplane. ARR 5E22 (WR A-37), July 1945.
- Johnson, Harold I.: A Comparison of Data Obtained by Two Flight Techniques for Determining the Sideslip Characteristics of a Fighter Airplane. RB L5F25a (WR L-87), Aug. 1945.
- Delany, Noel K. and Kauffman, William M.:
 Correlation of Wind-Tunnel Predictions with Flight Tests of a Twin-Engine Patrol Airplane. II Lateraland Directional-Stability and -Control Characteristics. MR A5H30 (WR A-71), Aug. 1945.
- Keller, Thomas L. and Keuper, Robert F.: Comparison of the Energy Method with the Accelerometer Method of Computing Drag Coefficients from Flight Data. CB 5H31 (WR A-57), Oct. 1945.
- Baals, Donald D. and Mourhess, Mary J.:
 Numerical Evaluation of the WakeSurvey Equations for Subsonic Flow
 Including the Effect of Energy Addition.
 ARR L5H27 (WR L-5), Nov. 1945.
- Vincenti, Walter G. and Graham, Donald J.: The Effect of Wall Interference upon the Aerodynamic Characteristics of an Airfoil Spanning a Closed Throat Circular Wind Tunnel. Rept. 849, 1946.
- Gardner, Clifford S. and LaHatte, James A., Jr.: Determination of Induced Velocity in Front of an Inclined Propeller by a Magnetic-Analogy Method. ARR L6A05b (WR L-154), Feb. 1946.

- Weske, John R.: Measurement of the Arithmetic Mean Velocity of a Pulsating Flow of High Velocity by the Hot-Wire Method. TN 990, April 1946.
- Stalder, Jackson R. and Zeiller, E. Lewis: A Method for the Determination of Air Infiltration Rates in Airplane Cabins. TN 1017, April 1946.
- Huber, Paul W.: Use of Freon-12 as a Fluid for Aerodynamic Testing. TN 1024, April 1946.
- Pearson, Henry A. and Beadle, Dorothy E.: Flight Measurements by Various Methods of the Drag Characteristics of the XP-51 Airplane. MR L6F12 (WR L-741), June 1946.
- Bishop, Robert C. and Lomax, Harvard L.: A Simplified Method for Determining from Flight Data the Rate of Change of Yawing-Moment Coefficient with Sideslip. TN 1076, June 1946.
- Vogelpohl, G. and Mannesmann, D.: Flow Investigation with the Aid of the Ultramicroscope. TM 1109, Oct. 1946.
- Huber, Paul W. and Kantrowitz, Arthur: A Device for Measuring Sonic Velocity and Compressor Mach Number. RM L6K14, Jan. 1947.
- Walchner, O.: Systematic Wind-Tunnel Measurements on Missiles. TM 1122, March 1947.
- Mendelsohn, Robert A. and Polhamus, Josephine F.: Effect of the Tunnel-Wall Boundary Layer on Test Results of a Wing Protruding from a Tunnel Wall. TN 1244, April 1947.
- Von Doenhoff, Albert E. and Abbott, Frank T., Jr.: The Langley Two-Dimensional Low-Turbulence Pressure Tunnel. TN 1283, May 1947.
- MacLachlan, Robert and Letko, William: Correlation of Two Experimental Methods of Determining the Rolling Characteristics of Unswept Wings. TN 1309, May 1947.
- Von Baranoff, A.: Tunnel Correction for Compressible Subsonic Flow. TM 1162, July 1947.
- Ludwieg, H.: Drag Corrections in High-Speed Wind Tunnels. TM 1163, July 1947.
- Regenscheit, B.: Drag Reduction by Suction of the Boundary Layer Separated Behind Shock Wave Formation at High Mach Numbers. TM 1168, July 1947.

- Von Vietinghoff-Scheel, K.: Laboratory Report on the Investigation of the Flow Around Two Turbine-Blade Profiles Using the Interference Method. TM 1171, July 1947.
- Johnson, Daniel P.: Calibration of Altimeters Under Pressure Conditions Simulating Dives and Climbs. TN 1562, March 1948.
- Von Doenhoff, Albert E .: Note on Similarity Conditions for Flows with Heat Transfer. TN 1577, April 1948.
- Cooper, George E. and Rathert, George A., Jr.: Visual Observations of the Shock Wave in Flight. RM A8C25, May 1948.
- Göthert, B.: Comparison of Drop and Wind-Tunnel Experiments on Bomb Drag at High Subsonic Speeds. TM 1186, May 1948.
- Huston, Wilber B .: Accuracy of Airspeed Measurements and Flight Calibration Procedures. TN 1605, June 1948.
- Phillips, William H .: Aprreciation and Prediction of Flying Qualities. TN 1670, Aug. 1948.
- Harper, Paul W. and Flanigan, Roy E .: Investigation of the Variation of Maximum Lift for a Pitching Airplane Model and Comparison with Flight Results. TN 1734, Oct. 1948.
- Williams, Thomas W. and Benson, James M.: Preliminary Investigation of the Use of Afterglow for Visualizing Low-Density Compressible Flows. RM L9A24a, Feb. 1949.
- Sternfield, Leonard and Gates, Ordway B., Jr.: A Method of Calculating a Stability Boundary that Defines a Region of Satisfactory Period-Damping Relationship of the Oscillatory Mode of Motion. TN 1859, April 1949.

HYDRODYNAMICS

(9.2.3)

- Verduzio, R.: Hydrodynamic Tests for Determining the Take-Off Characteristics of Seaplanes. TM 204, May 1923.
- Gebers, Friedrich: Law of Similitude for the Surface Resistance of Lacquered Planes Moving in a Straight Line Through Water. TM 308, April 1925.
- Benoit, Lt.: Designing Seaplane Hulls and Floats. TM 376, Aug. 1926.

- Herrmann, H.; Kempf, G. and Kloess, L.: Tank Tests of Twin Seaplane Floats. TM 486, Oct. 1928.
- Thompson, F. L.: Water Pressure Distribution on a Twin-Float Seaplane. Rept. 328, 1929.
- Schroder, P.: Towing Tests of Models as an Aid in the Design of Seaplanes. TM 676, July 1932.
- Sottorf, W.: Scale Effect of Model in Seaplane-Float Investigations. TM 704, April 1933.
- Kempf, G. and Sottorf, W .: The High-Speed Tank of the Hamburg Shipbuilding Company. TM 735, Feb. 1934.
- Pabst, Wilhelm: The Development of Floats and Equipment for Research in Promoting It. TM 740, March 1934.
- Schmidt, Rudolph: The Scale Effect in Towing Tests with Airplane Float Systems. TM 826, May 1937.
- Truscott, Starr: The Enlarged NACA Tank, and Some of Its Work. TM 918, Nov. 1939.
- Ward, Kenneth E .: A New Method of Studying the Flow of the Water Along the Bottom of a Model of a Flying-Boat Hull. TN 749, Feb. 1940.
- Preiswerk, Ernst: Application of the Methods of Gas Dynamics to Water Flows with Free Surface. II - Flows with Momentum Discontinuities (Hydraulic Jumps). TM 935, March 1940.
- Parkinson, John B. and Olson, Roland E .: Tank Tests of a 1/5 Full-Size Dynamically Similar Model of the Army 0A-9 Amphibian with Motor-Driven Propellers - NACA Model 117. ARR (WR L-475), Dec. 1941.
- Truscott, Starr and Olson, Roland E .: The Longitudinal Stability of Flying Boats as Determined by Tests of Models in the NACA Tank. II - Effect of Variations in Form of Hull on Longitudinal Stability. ARR (WR L-468), Nov. 1942.
- Olson, Roland E. and Land, Norman S.: Methods Used in the NACA Tank for the Investigation of the Longitudinal-Stability Characteristics of Models of Flying Boats. Rept. 753, 1943.
- Ebert, John W., Jr.: A Comparison of the Porpoising Limits of Two Flying Boats and Their Tank Models. RB, Feb. 1943.

Hydrodynamics (Cont.)

- Davidson, Kenneth S. M. and Locke, F. W. S., Jr.: Some Analyses of Systematic Experiments on the Resistance and Porpoising Characteristics of Flying-Boat Hulls. ARR 3106 (WR W-68), Sept. 1943.
- Locke, F. W. S., Jr.: General Porpoising Tests of Flying-Boat-Hull Models. ARR 3117 (WR W-96), Sept. 1943.
- Locke, F. W. S., Jr. and Bott, Helen L.:
 A Method for Making Quantitative
 Studies of the Main Spray Characteristics of Flying-Boat Hull Models.
 ARR 3K11 (WR W-69), Nov. 1943.
- Batterson, Sidney A.: The NACA Impact Basin and Water Landing Tests of a Float Model at Various Velocities and Weights. Rept. 795, 1944.
- Locke, F. W. S., Jr.: General Resistance Tests on Flying-Boat Hull Models. ARR 4B19 (WR W-70), Feb. 1944.
- Locke, F. W. S., Jr.: "General" Main-Spray Tests of Flying-Boat Models in the Displacement Range. ARR 5A02 (WR W-72), April 1945.
- Benson, James M. and Bidwell, Jerold M.: Bibliography and Review of Information Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept. 1945.

STRUCTURES AND MATERIALS

(9.2.4)

- Walen, E. Dean: The Structure of Airplane Fabrics. Rept. 36, 1919.
- Smith, W. H.: Airplane Dopes and Doping. Rept. 38, 1920.
- Edwards, Junius D. and Moore, Irwin L.: The Testing of Balloon Fabrics. Rept. 39, 1920.
- Silsbee, F. B. and Honaman, R. K.: Properties and Preparation of Ceramic Insulators for Spark Plugs. I Methods of Measuring Resistance of Insulators at High Temperatures. Rept. 53, 1920.
- Preprint from Fifth Annual Report: Construction of Models for Tests in Wind Tunnels. Rept. 74, 1920.
- Warner, E. P.: Static Testing and Proposed Standard Specifications. TN 6, July 1920.
- Ford, James B.: The Nichols Wing Cutting Equipment. TN 172, Dec. 1923.

- Trayer, George W. and March, H. W.: The Torsion of Members Having Sections Common in Aircraft Construction. Rept. 334, 1930.
- Knerr, Horace: Identification of Aircraft Tubing by Rockwell Test. TN 342, June 1930.
- Methods for the Identification of Aircraft Tubing of Plain Carbon Steel and Chromium-Molybdenum Steel. TN 350, Oct. 1930.
- Küssner, Hans Georg: Optico-Photographic Measurements of Airplane Deformations. TM 610, March 1931.
- Mathar, Josef: Determination of Inherent Stresses by Measuring Deformations of Drilled Holes. TM 702, March 1933.
- Oppel, G.: The Photoelastic Investigation of Three-Dimensional Stress and Strain Conditions. TM 824, April 1937.
- Lundquist, Eugene E. and Kroll, W. D.: Tables of Stiffness and Carry-Over Factor for Structural Members Under Axial Load. TN 652, June 1938.
- Lundquist, Eugene E.: Generalized Analysis of Experimental Observations in Problems of Elastic Stability. TN 658, July 1938.
- Thormann, A. and Jockisch, H.: Modern Manufacturing Equipment of the Ernst Heinkel Airplane Works. TM 882, Nov. 1938.
- Aitchison, C. S. and Tuckerman, L. B.: The "Pack" Method for Compressive Tests of Thin Specimens of Materials Used in Thin-Wall Structures. Rept. 649, 1939.
- Rambert, Walter; McPherson, Albert E. and Levy, Sam: Experimental Study of Deformation and of Effective Width in Axially Loaded Sheet-Stringer Panels TN 684, Feb. 1939.
- Hill, H. N.: A Semi-Graphical Method for Analyzing Strains Measured on Three or Four Gage Lines Intersecting at 45°. TN 709, May 1939.
- Weller, R. and Bussey, J. K.: Photoelastic Analysis of Three-Dimensional Stress Systems Using Scattered Light. TN 737, Nov. 1939.
- Müller, W.: New Equipment for Testing the Fatigue Strength of Riveted and Welded Joints. TM 947, July 1940.
- Muller, W.: Creep Strength of Stabilized Wrought-Aluminum Alloys. TM 960, Nov. 1940.

- Structures and Materials (Cont.)
- Upson, Ralph H.: Structural Tests of a Stainless Steel Wing Panel by Hydrostatic Loading. TN 786, Nov. 1940.
- Aitchison, C. S.: Extension of Pack Method for Compressive Tests. TN 789, Dec. 1940.
- Holt, Marshall: The Effect of Methods of Testing on the Ultimate Loads Supported by Stiffened Flat Sheet Panels Under Edge Compression. TN 811, June 1941.
- Paul, D. A.; Howell, F. M. and Grieshaber, H. E.: Comparison of Stress-Strain Curves Obtained by Single-Thickness and Pack Methods. TN 819, Aug. 1941.
- Dose, A.: Determination of the Bending and Buckling Effect in the Stress Analysis of Shell Structures Accessible from One Side Only. TM 997, Dec. 1941.
- McPherson, Albert E.; Ramberg, Walter and Levy, Samuel: Normal-Pressure Tests of Circular Plates with Clamped Edges. Rept. 744, 1942.
- Ramberg, Walter; McPherson, Albert E. and Levy, Samuel: Normal-Pressure Tests of Rectangular Plates. Rept. 748, 1942.
- Hootman, James A.: A Method for the Dynamic Calibration of Accelerometers. MP 47, March 1942.
- Ramberg, Walter; McPherson, Albert E. and Levy, Samuel: Normal-Pressure Tests of Rectangular Plates. TN 849, June 1942.
- Matthaes, K.: Strength Tests on Hulls and Floats. TM 1019, June 1942.
- Hess, W. F.; Wyant, R. A. and Averbach, B. L.: An Investigation of Current Wave Form for Spot-Welding Alclad 24S-T, 0.020 Inch in Thickness. Progress Report No. 9 on Aircraft Spot-Welding Research. MR, Nov. 1942.
- Ruffner, Benjamin F.: Stress Analysis of Monocoque Fuselage Bulkheads by the Photoelastic Method. TN 870, Dec. 1942.
- Von Hippel, Arthur R. and Dietz, A. G. H.: Curing of Resin-Wood Combinations by High-Frequency Heating. TN 874, Dec. 1942.
- Dow, Norris F.: The Analysis of Strains Indicated by Multiple-Strand Resistance-Type Wire Strain Gages Used as Rosettes. ARR (WR L-536), Jan. 1943.

- McPherson, A. E.: Adaptor for Measuring Principal Strains with Tuckerman Strain Gage. TN 898, June 1943.
- Ramberg, Walter and Osgood, William R.:
 Description of Stress-Strain Curves
 by Three Parameters. TN 902, July
 1943.
- Lundquist, Eugene E.; Rossman, Carl A. and Houbolt, John C.: A Method for Determining the Column Curve from Tests of Columns with Equal Restraints Against Rotation on the Ends. TN 903, Aug. 1943.
- Aitchison, C. S. and Miller, James A.: A Subpress for Compressive Tests. TN 912, Dec. 1943.
- Lundquist, Eugene E. and Kroll, W. D.: Extended Tables of Stiffness and Carry-Over Factor for Structural Members Under Axial Load. ARR 4B24 (WR L-255), Feb. 1944.
- Hill, H. N.: Determination of Stress-Strain Relations from "Offset" Yield Strength Values. TN 927, Feb. 1944.
- Manson, S. S.: Charts for Rapid Analysis of 45° Strain-Rosette Data. TN 940, May 1944.
- Manson, S. S.: An Automatic Electrical Analyzer for 45° Strain-Rosette Data. TN 941, May 1944.
- Schuette, Evan H. and Roy, J. Albert: The Determination of Effective Column Length from Strain Measurements. ARR L4F24 (WR L-198), June 1944.
- Tumarkin, S.: Methods of Stress Calculation in Rotating Disks. TM 1064, Sept. 1944.
- Bennett, John A.: Early Detection of Cracks Resulting from Fatigue Stressing. RB 4115 (WR W-78), Sept. 1944.
- Heimerl, George J. and Roy, J. Albert:
 Determination of Desirable Lengths of
 Z- and Channel-Section Columns for
 Local-Instability Tests. RB L4H10
 (WR L-180), Oct. 1944.
- Peiser, A. M. and Wilkerson, M.: A Method of Analysis of V-G Records from Transport Operations. Rept. 807, 1945.
- Kotanchik, Joseph N.; Woods, Walter and Weinberger, Robert A.: Investigation of Methods of Supporting Single-Thickness Specimens in a Fixture for Determination of Compressive Stress-Strain Curves. RB L5E15 (WR L-189), May 1945.

- Structures and Materials (Cont.)
- Velikov, P. A.; Stchapov, N. P. and Lorenz, W. F.: Micromechanical Study of Metals. TM 1083, July 1945.
- Sachs, George; Smith, Charles S.; Lubahn, Jack D.; Davis, Gordon E. and Ebert, Lynn J.: Nondestructive Measurement of Residual and Enforced Stresses by Means of X-Ray Diffraction. I Correlated Abstract of the Literature. TN 986, Sept. 1945.
- Ruffner, Benjamin F. and Schmidt, Calvin L.: Stresses at Cut-Outs in Shear Resistant Webs as Determined by the Photoelastic Method. TN 984, Oct. 1945.
- Sachs, George; Smith, Charles S.; Lubahn, Jack D.; Davis, Gordon E. and Ebert, Lynn J.: Nondestructive Measurement of Residual and Enforced Stresses by Means of X-Ray Diffraction. II Some Applications to Aircraft Problems. TN 987, Nov. 1945.
- Budiansky, Bernard and Hu, Pai C.: The Lagrangian Multiplier Method of Finding Upper and Lower Limits to Critical Stresses of Clamped Plates. Rept. 848, 1946.
- Ruffner, B. F.: Stress Analysis of Columns and Beam Columns by the Photoelastic Method. TN 1002, March 1946.
- Warshawsky, Isidore: A Multiple Bridge for Elimination of Contact-Resistance Errors in Resistance Strain-Gage Measurements. TN 1031, March 1946.
- Campbell, William R.: Errors in Indicated Strain for a Typical Wire Strain Gage Caused by Prestraining, Temperature Changes, and Weathering. TN 1011, April 1946.
- Miller, James A.: A Fixture for Compressive Tests of Thin Sheet Metal Between Lubricated Steel Guides. TN 1022, April 1946.
- Hu, Pai C.; Lundquist, Eugene E. and Batdorf, S. B.: Effect of Small Deviations from Flatness on Effective Width and Buckling of Plates in Compression. TN 1124, Sept. 1946.
- Manson, S. S. and Morgan, W. C.: Effect of Misalinement of Strain-Gage Components of Strain Rosettes. TN 1133, Sept. 1946.
- McPherson, A. E.: Device for Measuring Principal Curvatures and Principal Strains on a Nearly Plane Surface. TN 1137, Feb. 1947.

- Ross, Robert D.: An Electrical Computer for the Solution of Shear-Lag and Bolted-Joint Problems. TN 1281, May 1947.
- Ekstein, Hans and Siegel, Stanley: Limits of Precision in the Determination of Lattice Parameters and Stresses by the Debye-Scherrer Method. TN 1375, Oct. 1947.
- Kittel, J. Howard: Comparison of Crystal Structures of 10 Wrought Heat-Resisting Alloys at Elevated Temperatures with Their Crystal Structures at Room Temperatures. TN 1488, Nov. 1947.
- Norris, C. B. and Voss, A. W.: An Improved Photoelastic Method for Determining Plane Stresses. TN 1410, Jan. 1948.
- Hoffman, Charles A. and Ault, G. Mervin: Application of Statistical Methods to the Study of Gas-Turbine Blade Failures. TN 1603, June 1948.
- Good, James N.: Residual Stress Analysis of Overspeeded Disk with Central Hole by X-Ray Diffraction. RM E8E11, July 1948.

PROPULSION

(9.2.5)

- Sparrow, S. W.: Instrument for Measuring Engine Clearance Volumes. TN 27, Dec. 1920.
- Tice, Percival S. and Dickinson, H. C.: Metering Characteristics of Carburetors. Rept. 49, 1920.
- Kemble, E. C.: Calculation of Low-Pressure Indicator Diagrams. Rept. 50, 1920.
- Elsasser, R.: Measuring Vibration and Torque with the Oscillograph. TM 291, Dec. 1924.
- Praetorius, K. R. H.: The Problem of Fuel Measurement (the Schiske "Konsummeter"). TM 315, May 1925.
- Beardsley, Edward G.: The NACA Photographic Apparatus for Studying Fuel Sprays from Oil Engine Injection Valves and Test Results from Several Researches. Rept. 274, 1927.
- Spanogle, J. A. and Buckley, E. C.: The NACA Combustion Chamber Gas-Sampling Valve and Some Preliminary Test Results. TN 454, March 1933.

Propulsion (Cont.)

- Gerrish, Harold C. and Ayer, Bruce E.: Influence of Fuel-Oil Temperature on the Combustion in a Prechamber Compression-Ignition Engine. TN 565, April 1936.
- Marti, Willy: Valve-Spring Surge. TM 818, March 1937.
- Serruys, Max: Experimental Study of Ignition by Hot Spot in Internal Combustion Engines. TM 873, Aug. 1938.
- Seeber, F.: Modern Methods of Fuel Testing. TM 924, Dec. 1939.
- Dutee, Francis J.: An Apparatus for Measuring Rates of Discharge of a Fuel-Injection System. Rept. 714, 1941.
- Ellerbrock, Herman H., Jr. and Goldstein, Arthur W.: Effect of Humidity on Several Supercharger Parameters. ARR (WR E-51), Nov. 1941.
- Ellerbrock, Herman H. and Goldstein, Arthur W.: Principles and Methods of Rating and Testing Centrifugal Superchargers. ARR (WR E-7), Feb. 1942.
- Brevoort, M. J. and Tifford, A. N.: An Experimental Investigation of Flow Across Tube Banks. ARR (WR L-232), March 1942.
- Czarnecki, K. R.: Pressure-Prop Characteristics of Orifice Plates Used to Simulate Radiators. ARR (WR L-342), March 1942.
- Meier, Adolf: Recording Rapidly Changing Cylinder-Wall Temperatures. TM 1013, May 1942.
- Gerrish, Harold C. and Meem, J. Lawrence, Jr.: The Measurement of Fuel-Air Ratio by Analysis of the Oxidized Exhaust Gas. Rept. 757, 1943.
- Voglewede, T. J.: A Proposed Method of Measuring Engine Charge Air Flow in Flight. CB L4E25 (WR L-200), May 1944.
- Corson, Blake W., Jr.: Application of the Method of Least Squares to Engine-Cooling Analysis. ARR L4H23 (WR L-130), Aug. 1944.
- Leary, W. A. and Jovellanos, J. U.: A Study of Piston and Ring Friction. ARR 4J06 (WR W-47), Nov. 1944.
- Gerrish, Harold C.; Meem, J. Lawrence, Jr. and Tuck, Vivian C.: The Oxidation of Exhaust Gases at Room Temperature. ARR E5B01a (WR E-62), Feb. 1945.

- Dutee, Francis J.; Phillips, Franklyn W. and Kemp, Richard H.: Operating Stresses in Aircraft-Engine Crank-shafts and Connecting Rods. I-Slip-Ring and Brush Combinations for Dynamic-Strain Measurements. MR E5C30 (WR E-187), March 1945.
- Nettles, J. Cary and Hanson, Morgan P.: Flight Tests of a P-63A-1 Airplane with an Electric Torquemeter. ARR E5B16 (WR E-64), March 1945.
- Gnam, E.: A New Apparatus for Measuring the Temperature at Machine Parts Rotating at High Speeds. TM 1080, April 1945.
- Cook, Harvey A. and Brightwell, Virginia L.: Relation Between Fuel Economy and Crank Angle for the Maximum Rate of Pressure Rise. MR E5E21 (WR E-179), May 1945.
- Stone, Charles S. and Kramer, Walter E.:
 Fuel-Vaporization Loss as Determined
 by the Change in the Specific Gravity
 of the Fuel in an Aircraft Fuel Tank.
 RB E5E19 (WR E-113), May 1945.
- Dutee, Francis J.; Phillips, Franklyn W. and Calvert, Howard F.: Operating Stresses in Aircraft-Engine Crankshafts and Connecting Rods. II Instrumentation and Test Results. MR E5H18 (WR E-191), Aug. 1945.
- Mulholland, Donald R.; Rollin, Vern G. and Galvin, Herman B.: Laboratory Investigation of Icing in the Carburetor and Supercharger Inlet Elbow of the Lockheed P-38J Airplane. I Description of Setup and Testing Technique. MR E5L13 (WR E-170), Dec. 1945.
- NACA Subcommittee on Compressors: Standard Procedures for Rating and Testing Multistage Axial-Flow Compressors. TN 1138, Sept. 1946.
- Manson, S. S.: The Determination of Elastic Stresses in Gas-Turbine Disks. Rept. 871, 1947.
- Kemp, R. H.; Morgan, W. C. and Manson, S. S.: The Application of High-Temperature Strain Gages to the Measurement of Vibratory Stresses in Gas-Turbine Buckets. TN 1174, April 1947.
- Manson, S. S. and Morgan, W. C.: Distribution of Bearing Reactions on a Rotating Shaft Supported on Multiple Journal Bearings. TN 1280, May 1947.

Propulsion (Cont.)

- Valerino, Michael F. and Kaufman, Samuel J.: Cylinder-Temperature and Cooling-Air-Pressure Instrumentation for Air-Cooled-Engine Cooling Investigations. TN 1509, Jan. 1948.
- Essig, Robert H.; Bohanon, H. R. and Gabriel, David S.: Jet Diffuser for Simulating Ram-Pressure Conditions on a Turbojet-Engine Static Test Stand. TN 1687, Aug. 1948.
- McCann, W. J. (July, 1943): Thermodynamic Charts for Internal-Combustion-Engine Fluids. Revised by Turner, L. R. and Bauer, Emory A. TN 1883, July 1949.

OPERATING PROBLEMS

(9.2.6)

Eaton, H. N.: Aeronautic Instruments Section. VII - Aerial Navigation and Navigating Instruments. Rept. 131, 1922.

- Committee on Aircraft Accidents: Aircraft Accidents Method of Analysis. Rept. 357, 1930.
- Magnan, A.: Methods of Recording Rapid Wind Changes. TM 692, Nov. 1932.
- London, Albert: Principles, Practice, and Progress of Noise Reduction in Airplanes. TN 748, Jan. 1940.
- Dawson, John R. and Jarvis, George A.:
 Ditching Tests with a 1/10-Size Model
 of the Army A-20A Airplane. I CalmWater Tests in NACA Tank No. 2. MR
 (WR L-584), Nov. 1943.
- Peiser, A. M. and Wilkerson, M.: A Method of Analysis of V-G Records from Transport Operations. Rept. 807, 1945.
- Helfand, B. B.: Meteorological Conditions Associated with Flight Measurements of Atmospheric Turbulence. TN 1273, June 1947.
- Bergrun, Norman R.: A Method for Numerically Calculating the Area and Distribution of Water Impingement on the Leading Edge of an Airfoil in a Cloud. TN 1397, Aug. 1947.

NOMENCLATURE

(10)

- NACA: Nomenclature for Aeronautics. Rept. 9, 1916.
- NACA: Nomenclature for Aeronautics. Rept. 15, 1917.
- NACA: Nomenclature for Aeronautics. Rept. 25, 1919.
- NACA: Nomenclature for Aeronautics. Rept. 91, 1921.
- Wendt, F.: The Establishment of Standards in Airplane Construction. MP 4, May 1921.
- Nicolson, Captain David: Glossary of Terms Used in Flying Boat Hull Construction. TM 40, Sept. 1921.
- Lagarde, Martinot: Definition of Terms Used in Connection with Commercial Aircraft Engines. TM 167, Nov. 1922.
- NACA: Nomenclature for Aeronautics. Rept. 157, 1923.
- Knight, William; Prandtl, L.; von Karman, T.; Costanzi, G.; Margoulis, W.; Verduzio, R.; Katzmayr, Richard; Wolff, E. B. and Zahm, A. F.: Standardization and Aerodynamics. TN 134, March 1923.

- NACA: Nomenclature for Aeronautics. Rept. 240, 1928.
- NACA: Definition of Method of Measurement of Supporting and Control Surface Areas as Approved by Committee on Aerodynamics, Oct. 15, 1930, and Amended Feb. 14, 1931. MP 25, May 1931.
- NACA: Nomenclature for Aeronautics. Rept. 474, 1933.
- Aiken, William S., Jr.: Standard Nomenclature for Airspeeds with Tables and Charts for Use in Calculation of Airspeed. Rept. 837, 1946.
- NACA Subcommittee on Combustion: Symbols for Combustion Research. TN 1507, June 1948.
- NACA Subcommittee on Turbines: Provisional Symbols and Definitions for Aircraft Turbines. TN 1508, March 1949.

BIBLIOGRAPHIES AND INDEXES

(11)

- Baumann, A.: Progress Made in the Construction of Giant Airplanes in Germany During the War. TN 29, Dec. 1920.
- Hersey, Mayo D.: Aeronautic Instruments.
 I General Classification of Instruments and Problems Including Bibliography.
 Rept. 125, 1922.
- Aeronautical Record No. 1 (to June, 1923). Translation of "Chronique Aeronautique," Published by the "Societe d' Etudes et d'Informations Economiques." TM 243, Dec. 1923.
- Lundquist, Eugene E. and Kuhn, Paul: Bibliography of Stressed-Skin or Monocoque Structures for Aircraft. ACR, Dec. 1935.

- Guggenheim Aeronautical Laboratory, California Institute of Technology: Some Investigations of the General Instability of Stiffened Metal Cylinders. I - Review of Theory and Bibliography. TN 905, July 1943.
- Hersey, Mayo D.: Bibliography on Piston Ring Lubrication. TN 956, Oct. 1944.
- Rinker, R. C. and Kline, G. M.: Survey of Adhesives and Adhesion. TN 989, Aug. 1945.
- Newell, Joseph S.: A Preliminary Survey of Existing Information Pertaining to Dynamic Loads in Aircraft Structures. CB 5H03, Aug. 1945.

- Benson, James M. and Bidwell, Jerold M.: Bibliography and Review of Information Relating to the Hydrodynamics of Seaplanes. ACR L5G28 (WR L-230), Sept. 1945.
- Tetervin, Neal: A Review of Boundary-Layer Literature. TN 1384, July 1947.
- Fischel, Jack and Ivey, Margaret F.: Collection of Test Data for Lateral Control with Full-Span Flaps. TN 1404, April 1948.
- Huston, Wilber B.: Accuracy of Airspeed Measurements and Flight Calibration Procedures. TN 1605, June 1948.
- Gessow, Alfred: Bibliography of NACA Papers on Rotating-Wing Aircraft, June 1948. RM L7J30, July 1948.
- Gustafson, F. B.: The Application of Airfoil Studies to Helicopter Rotor Design. TN 1812, Feb. 1949.

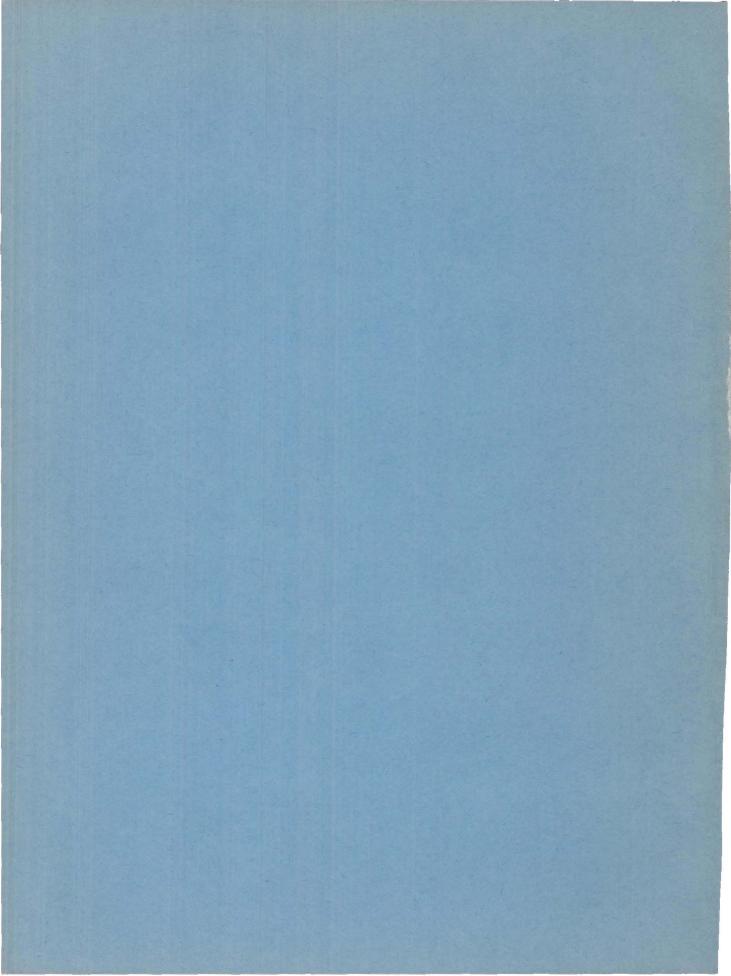
TECHNICAL SUMMARIES

(12)

- Weick, Fred E. and Jones, Robert T.: Resume and Analysis of NACA Lateral Control Research. Rept. 605, 1937.
- Lowry, John G.: Resume of Hinge-Moment Data for Unshielded Horn-Balanced Control Surfaces. RB 3F19 (WR L-169), June 1943.
- Sears, Richard I.: Wind-Tunnel Data on the Aerodynamic Characteristics of Airplane Control Surfaces. ACR 3L08 (WR L-633), Dec. 1943.
- Rogallo, F. M.: Collection of Balanced-Aileron Test Data. ACR 4A11 (WR L-419), Jan. 1944.
- Swanson, Robert S. and Crandall, Stewart M.: Analysis of Available Data on the Effectiveness of Ailerons Without Exposed Overhang Balance. ACR L4E01 (WR L-171), May 1944.
- Purser, Paul E. and Toll, Thomas A.: Analysis of Available Data on Control Surfaces Having Plain-Overhang and Frise Balances. ACR L4E13 (WR L-665), May 1944.

- Abbott, Ira H.; von Doenhoff, Albert E. and Stivers, Louis S., Jr.: Summary of Airfoil Data. Rept. 824, 1945.
- Quinn, John H., Jr.: Summary of Data Relating to the Effects of Wing Machine-Gun and Cannon Installations on the Aerodynamic Characteristics of Airplanes. ACR L4L21 (WR L-158), Jan. 1945.
- Sachs, George; Smith, Charles S.; Lubahn,
 Jack D.; Davis, Gordon E. and Ebert,
 Lynn J.; Case School of Applied Science:
 Nondestructive Measurement of Residual
 and Enforced Stresses by Means of
 X-Ray Diffraction. I Correlated
 Abstract of the Literature. TN 986,
 Sept. 1945.
- Crandall, Stewart M. and Murray, Harry E.: Analysis of Available Data on the Effects of Tabs on Control-Surface Hinge Moments. TN 1049, May 1946.
- Toll, Thomas A.: Summary of Lateral Control Research. TN 1245, March 1947.
- Cahill, Jones F.: Summary of Section Data on Trailing-Edge High-Lift Devices. RM L8D09, Aug. 1948.

ALPHABETICAL INDEX



Subject	Page	Subject	Page
A		Airplanes	168
THE RESIDENCE OF THE PARTY OF THE PARTY OF THE PARTY.		See also	
Accessories Ice Prevention and Removal	533	Airplanes, Specific Types	
Adhesives	488	Components in Combination	
Aerodynamic Loading		Performance	
(See Loading, Aerodynamic)		Airplanes, Specific Types	176
Aerodynamics	1	Airships	200
See also		Aluminum	472
Aerodynamic Loading		Amphibians	1 313
Aerodynamics, Fundamental		See	
Aircraft		Hydrodynamics	
Bodies		Seaplanes	
Internal Aerodynamics		Anti-Friction Bearings	390
Parachutes		Aspect Ratio, Complete Wings	79
Propellers		Atmosphere	512
Rotors		See also	
Stability and Control		Electricity	
Vibration and Flutter		Gusts	
Wings		Standard Atmosphere	
Aerodynamics, Fundamental	2	Atomization, Fuel	
See also		See	
Aerodynamics with Heat		Combustion, Effects of Fuel Atomization	
Compressible Flow		Fuels, Physical Properties	
Flow of Rarefied Gases		Augmentors, Thrust and Jet Pumps -	
Incompressible Flow		Aerodynamics	134
Viscous Flow		Automatic Control, Aerodynamic	262
Aerodynamics with Heat	22		354
See also	22	Auxiliary Booster Systems See also	334
Heat, Additions of - Aerodynamic		Gas Turbines, Auxiliary Booster Systems	
Heat Transfer, Aerodynamic		Reciprocating Engines, Auxiliary Booster	
Heating, Aerodynamic		Systems Systems	
			376
Aerodynamics, Internal (See Internal Aerodynamics)		Axial Flow Compressors	382
	578	Axial Flow Turbines	302
Aerodynamics Research Technique	291	В	
Afron by Share Samlana Halla	306		419
Afterbody Shape, Seaplane Hulls	354	Beam, Columns, Structural	412
Afterburning, Gas Turbines	399	Beams, Structural	427
Aftercoolers	292	See also	
Aileron Vibration and Flutter		Box Beams	
Air Cooling, Reciprocating Engines	404	Diagonal Tension Beams	
Airbrakes	253	Bearings	
Aircraft	168	See	
See also		Anti-Friction Bearings	
Airplanes		Sleeve Bearings	
Airships		Slipper Plate Bearings	
Biplanes and Triplanes		Bending in Structures	453
Missiles		Bends, Internal Aerodynamics	133
Rotating-Wing Aircraft		Bibliographies and Indexes	589
Airframe Materials, Operating Stresses	508	Biplanes and Triplanes	202
Airplane Performance	190	Blade Sections, Propellers	145

Subject	Page	Subject	Page
Bodies	114	Columns, Structural	412
See also	NE W	See also	
Bodies, Theory		Beam Columns, Structural	
Canopies	11.77	Sections, Columns-Structural	
Ducted Bodies	All I a	Tubular Columns, Structural	
Hulls, Aerodynamic		Combustion	366
Shape Variables	I grund	See also	
Bodies, Theory	114	Combustion, Relation to Specific	
Bodies, Vibration and Flutter	294	Engine Types	
Body-Tail Combinations, Missiles	195	Combustion Research, General	
Body-Wing Combinations, Missiles	195	Combustion, Effect of Engine Operating	
Bolted Connections	437	Conditions and Combustion Chamber	
Bonded Connections	442	Geometry	368
Booster Systems, Auxiliary		See also	
See	Jagar.	Pulse Jet Engines, Combustion	
Auxiliary Booster Systems	TOWN OF	Ram Jet Engines, Combustion	
Boundary Layer, Complete Wings	113	Reciprocating Engines, Combustion	
Boundary Layer, Internal Aerodynamics	138	Rocket Engines, Combustion	
Boundary Layer, Wing Sections	59	Turbine Engines, Combustion	
Box Beams	429	Combustion, Effects of Fuel Atomization	368
Boxes, Structural	435	Combustion - Relation to Specific	
Buffeting and Gust Loads, Tail	288	Engine Types	
	3146	See	
(Combustion, Effect of Engine Opera-	
There is a second to the secon	Site Life	ting Conditions and Combustion	
Camber, Wing Section	32	Chamber Geometry	
Canopies	121	Combustion Research, General	366
Canopy Loading	WINE ST	See also	
See		Detonation	
Loading-Fuselage, Nacelle, and		Fuel Atomization Effects	
Canopy		Ignition of Gases	
Cascades, Internal Aerodynamics	136	Turbulent-Flow Combustion	
Centrifugal Compressors		Components in Combination, Airplanes	168
See		See also	
Radial Flow Compressors		External Stores Effects	
Ceramals		Propeller and Jet Interference	
See		Tail, Wing, and Fuselage Combinations	
Ceramics		Wing-Fuse lage Combinations	
Ceramics	485	Wing-Nacelle Combinations	
Charging and Control of Engines	341	Components in Combination, Missiles	195
See also		See also	
Gas Turbine Engines, Charging and		Jet Interference	
Control		Tail, Body Combinations	
Ram Jet and Pulse Jet Engines,		Wing, Body Combinations	
Charging and Control		Wing, Tail, Body Combinations	
Reciprocating Engines, Charging and		Compound Engines	334
Control		Compressible Flow	6
Rocket Engines, Charging and		See also	4
Control		Mixed Flow	
Chemistry of Lubrication	386	Subsonic Flow	
Chines, Seaplane Hulls	309	Supersonic Flow	

Subject	Page	Subject	Page
	100		
Compression-Ignition Engines	331	Controls, Flap Type - Complete Wings	99
Compression-Ignition Engines, Combustion	373	Controls, Flap Type - Wing Sections	54
Compression-Ignition Engines, Fuels	364	Controls, Spoilers - Complete Wings	103
Compression in Structures	445	Controls, Spoilers - Wing Sections	58
Compressive Properties of Materials	499	Controls, Wing Sections	54
Compressor Flow Theory and Experiment	376	See also	0.4
See also	01.7	Flap Type	
Axial Flow Compressors		Spoilers	
Mixed Flow Compressors		Cooling	401
Positive Displacement Compressors		See also	17 100
Radial Flow Compressors		Reciprocating Engine Cooling	
Compressor Stresses	380	Gas Turbine Cooling	
Compressor Vibration and Flutter	294	Cooling, Turbines	409
Compressors	376	Corrections, Research	575
See also		Corrosion Resistance Properties of	
Compressor Flow Theory and Experi-		Materials	505
ment		Crash	
Matching, Compressors		See	
Stress and Vibration, Compressors	0.5190	Safety, Operations	
Compressors, Internal Aerodynamics	135	Creep Properties of Materials	501
See also		Cross Sections, Bodies	118
Cascades		Curved Plates, Stiffened	425
Concentrated Loads and Stresses	464	Curved Plates, Structural	425
Configurations, Hydrodynamic	300	See also	
Connections, Structural	437	Curved Plates, Stiffened	
See also	190	Curved Plates, Unstiffened	
Bolted Connections		Curved Plates, Unstiffened	425
Bonded Connections		Cylinder and Piston Mechanisms	389
Riveted Connections		Cylinders, Circular - Structural	432
Welded Connections	2-11	Cylinders, Elliptical - Structural	435
Control, Aerodynamic	232	Cylinders, Structural	432
See also		See also	
Airbrakes	100	Cylinders, Circular - Structural	
Automatic Control	6.77	Cylinders, Elliptical - Structural	
Directional Control			
Hinge Moments	THE PARTY	the second secon	
Lateral Control		D	
Longitudinal Control		D . D	220
Control and Charging of Engines		Damping Derivatives, Stability	229
See		Deadrise, Seaplane Hulls	303
Charging and Control of Engines		Designated Profiles, Wing Sections	40
Control and Stability, Aerodynamic		Detonation	368
See		Diagonal Tension Beams	431
Stability and Control		Diameter, Propellers	159
Control and Stability, Hydrodynamic		Diesel Engines	
See	T Nova	See	
Stability and Control, Hydrodynamic	N/ The	Compression-Ignition Engines	
Controls, Complete Wings	98	Diffusers, Internal Aerodynamics	130
See also		Directional Control	250
Flap Type Controls		Directional and Lateral Stability,	005
Spoilers		Dynamic	225

Subject	Page	Subject	Page
Directional Stability and Control,		Fineness Ratio, Bodies	118
Hydrodynamic	322	Fire Prevention	110
Directional Stability, Static	218	See	
Ditching Characteristics	319	Safety, Operations	
Dual Rotation, Propellers	154	Flap Type Controls, Complete Wings	99
Ducted Bodies	121	Flap Type Controls, Wing Sections	54
See also	121	Flaps, Complete Wings	91
Exits, Side - Ducted Bodies		Flaps, Leading Edge - Wing Sections	52
Inlets, Side - Ducted Bodies		Flaps, Plain - Wing Sections	46
Nose Shape, Ducted Bodies		Flaps, Slotted - Wing Sections	50
Tail Shape, Ducted Bodies		Flaps, Split - Wing Sections	48
Ducted Propeller Engines	337	Flat Plates, Stiffened	422
Ducts, Internal Aerodynamics	129	Flat Plates, Structural	419
See also		See also	
Bends, Internal Aerodynamics		Flat Plates, Stiffened	
Diffusers, Internal Aerodynamics		Flat Plates, Unstiffened	
Nozzles, Internal Aerodynamics	Line	Flat Plates, Unstiffened	419
Pipes, Internal Aerodynamics		Flexural Properties of Materials	505
Dynamic Loads and Stresses	465	Flight Instruments	546
Dynamic Stability	222	Flight Operations	
See also		See ·	
Damping Derivatives, Stability		Operating Problems	
Lateral and Directional Stability,		The state of the s	214
Dynamic		Floats, Wing-Tip	314
Longitudinal Stability, Dynamic		Flow of Rarefied Gases See also	25
		Free Molecule Flow	
La	Maria 1		
Electricity, Atmospheric	517	Slip Flow	
Elevators and Rudders Vibration and		Flutter and Vibration	292
Flutter	294	See	
Engine Types, Comparisons	339	Vibration and Flutter	
Engines	100	Flying Boats	
See		See	
Propulsion Systems, Complete		Hydrodynamics	
Engines, Miscellaneous Types	339	Seaplanes	
Exhaust Energy Recovery, Reciprocating		Flying Qualities	269
Engines		Forebody Shape, Seaplane Hulls	307
See		Frames, Gridworks and Trusses	416
Reciprocating Engines with Turbines		Free Flight Research Equipment	566
Exits and Inlets, Complete Wings	88	Free Molecule Flow	26
Exits and Inlets, Wing Sections	38	Friction and Lubrication	385
Exits, Internal Aerodynamics	134	See also	
Exits, Side - Ducted Bodies	123	Friction and Lubrication Theory	
External Stores, Effects - Airplanes	176	and Experiment	
		Lubricants	
F		Lubrication Systems	
Fabrics	489	Rolling Contact Surfaces	
Fans, Internal Aerodynamics	137	Sliding Contact Surfaces	
Fans, Vibration and Flutter	294	Sliding and Rolling Contact	
Fatigue Properties of Materials	503	Surfaces	

Subject	Page	Subject	Page
Friction and Lubrication Theory and		Gust Alleviation	516
Experiment	385	Gust and Buffeting Loads, Tail	288
See also		Gust Frequency	514
Chemistry of Lubrication		Gust Loads, Wing	283
Hydrodynamic Theory of Lubrication		Gust Structure	513
Surface Conditions, Friction and		Gusts	513
Lubrication		See also	010
Fuel Atomization, Effects on Combustion	368	Gust Alleviation	
Fuel Supply Systems	0.70	Gust Frequency	
See Supply Systems		Gust Structure	
Gas Turbines	352	Turbulence, Gusts	
Reciprocating Engines	348	Gyroscopic and Mass Problems, Aerodynamic	
Rockets	353	See	
Fuels	355	Mass and Gyroscopic Problems,	
See also	000	Aerodynamic	
Fuels, Physical Properties		Aer odynamice	
Fuels, Preparation		H SEASON BOLLES	
Fuels, Relation to Engine Performance		Handling Ouglities	
Fuels, Physical Properties	356	Handling Qualities See	
Fuels, Preparation	356	Flying Qualities	
Fuels, Relation to Engine Performance	358		25
Fuselage Loading	330	Heat, Addition of, Aerodynamic	395
See		Heat Exchangers See also	393
LoadingFuselage, Nacelle, and Cano	nv		
Fuselage-Wing Combinations, Airplanes	170	Aftercoolers Intercoolers	
Fuselage, Wing and Tail Combinations -	110	Oil Coolers	
	173	Radiators	
Airplanes			
G		Regenerators	483
Gas Generator - Turbine Engines	336	Heat Resisting Alloys Heat Transfer	392
Gas Turbine Cooling	409	See also	394
	407		
Gas Turbine Engines See		Heat Exchangers	
		Heat Transfer Theory	92
Propulsion Systems, Complete	352	Heat Transfer, Aerodynamic	23 393
Gas Turbine Engines, Charging and Control	332	Heat Transfer Theory	
See also		Heating, Aerodynamic	23
Metering and Control Parameters,		Heating and Ventilating, Airplane	536
Gas Turbines		Helicopters	196
Fuel Supply Systems, Gas Turbines	254	See also	
Gas Turbines, Auxiliary Booster Systems See also	354	Rotating Wing Aircraft Rotors	
Afterburning, Gas Turbines		High Lift Devices, Complete Wings	91
Liquid Injection, Gas Turbines		See also	71
Gases, Ignition of	368	Flaps, Complete Wings	
Gases, Properties of	410		
Gases, Rarefied, Flow of	710	Slots and Slats, Complete Wings High Lift Devices, Wing Sections	46
See		See also	41)
Flow of Rarefied Gases			
Gears	390	Flans, Leading Edge - Wing Sections	
Gridworks, Frames and Trusses	416	Flaps, Plain - Wing Sections Flaps, Slotted - Wing Sections	
di iduot no, i i dileo dile i i usoco	-tT.)	rups, Stotted - Ittig Sections	

Subject	Page	Subject	Page
H. 1 1 . C. D W	16	7 11 71	
High Lift Devices, Wing Sections	46	Incompressible Flow	4
(Continued)		Indexes and Bibliographies	589
See also		Induction Systems Ice Prevention	530
Flaps, Split - Wing Sections		Inlets and Exits, Complete Wings	88
Slots and Slats	07.	Inlets and Exits, Wing Sections	38
Hinge Moments	254	Inlets, Leading Edge - Internal	100
Hull Variables, Seaplane		Aerodynamics	128
See		Inlets, Nose, Annular	127
Seaplane Hull Variables	100	Inlets, Nose, Central	126
Hulls, Aerodynamic	123	Inlets, Nose - Internal Aerodynamics	126
Hulls, Seaplane - Specific Types	311	See also	
Hydrodynamic Configurations	300	Inlets, Nose, Annular	
Hydrodynamic Theory	298	Inlets, Nose, Central	100
Hydrodynamic Theory of Lubrication	385	Inlets, Side - Ducted Bodies	123
Hydrodynamics	297	Inlets, Side - Internal Aerodynamics	128
See also		See also	
Ditching Characteristics		Scoops	
Hydrodynamic Configurations		Submerged Inlets	
Hydrodynamic Theory		Instruments	545
Hydrofoils		See also	
Impact Loads, Hydrodynamic		Flight Instruments	
Planing Surfaces, Hydrodynamic		Laboratory Instruments	
Seaplane Hull Variables		Meteorological Instruments	-
Seaplanes and Hulls, Specific Types		Intercoolers	399
Stability and Control, Hydrodynamic		Interference of Bodies, Propellers	155
Stabilizers, Lateral - Hydrodynamic		Interference, Jet - Missiles	195
Surface Craft, Hydrodynamic	500	Interference, Propeller and Jet -	
Hydrodynamics, Research Technique	583	Airplanes	175
Hydroflap		Intermittent Ram Jet	
See		See	
Planing Surfaces, Hydrodynamic	216	Pulse Jet Engines	105
Hydrofoils	316	Internal Aerodynamics	125
		See also	
The state of the s	510	Boundary Layer, Internal Aerodynamics	
Ice Formation, Atmosphere	518	Compressors, Internal Aerodynamics	
Ice Prevention and Removal	528	Ducts, Internal Aerodynamics	
See also		Exits, Internal Aerodynamics	
Accessories Ice Prevention and Removal		Fans, Internal Aerodynamics	
Induction System Ice Prevention and		Inlets, Leading Edge - Internal	
Removal		Aerodynamics	
Propeller Ice Prevention and Removal		Inlets, Nose - Internal Aerodynamics	
Propulsion Systems Ice Prevention		Inlets, Side - Internal Aerodynamics	
and Removal		Jet Pumps and Thrust Augmentors,	
Windshields Ice Prevention and		Internal Aerodynamics	
Removal		Turbines, Internal Aerodynamics	
Wings and Tails Ice Prevention and Removal		J	
Ignition of Gases	368	Jet-Driven Rotors	339
Ignition Systems, Reciprocating Engines	351	Jet Engine Fuels	
Impact Basins and Towing Tanks	568	See See	
Impact Loads, Hydrodynamic	317	Pulse Jet Engines, Fuels	

Subject	Page	Subject	Page
Let Engine Fuels (Continued)	1000	India Wine	276
Jet Engine Fuels (Continued) See	Lievi	Loading, Wing See also	210
Ram Jet Engines, Fuels		Gust Loads, Wing	
Rocket Fuels		Maneuvering Loads, Wing	
Turbine Engines, Fuels		Steady Loads, Wing	
Jet Interference, Missiles	195	Loads, Impact - Hydrodynamic	317
Jet Mixing	22	Loads and Stresses, Structural	443
Jet and Propeller Interference, Airplanes	175	See also	TTO
Jet Propulsion Engines	110	Bending in Structures	
See See	7	Compression in Structures	
Propulsion Systems, Complete		Concentrated Loads and Stresses	
Jet Pumps and Thrust Augmentors,		Dynamic Loads and Stresses	
Internal Aerodynamics	134	Normal Pressures in Structures	
Thousand Textodynamics		Shear in Structures	
and it will all the think the transfer		Tension in Structures	
The second second second second		Torsion in Structures	
Laboratory Instruments	552	Longitudinal Control	233
Laboratory Instruments Laminar Flow	18	Longitudinal Stability and Control,	200
Laminated Materials	490	Hydrodynamic	320
	490	Longitudinal Stability, Dynamic	222
Landing Loads See		Longitudinal Stability, Synamic	206
Dynamic Loads and Stresses		Lubricants	390
Lateral Control	240	Lubrication, Chemistry of	386
	240	Lubrication and Friction	300
Lateral and Directional Stability, Dynamic	225	See	
Lateral Stability and Control,	223	Friction and Lubrication	
	322	Lubrication, Hydrodynamic Theory	385
Hydrodynamic Lateral Stability, Static	213	Lubrication Systems	391
Lateral Stabilizers, Hydrodynamic	314	Edition Systems	371
See also	314	M	
Wing-Tip Floats		Mach Number Effects, Complete Wings	106
Length-Beam Ratio, Seaplane Hulls	302	Mach Number Effects, Propellers	152
Lightning Hazards to Aircraft	538	Mach Number Effects, Wing Sections	66
Liquid Cooling, Reciprocating Engines	403	Magnesium	480
Liquid Injection, Gas Turbines	354	Maneuvering Loads, Tail	287
Loading, Aerodynamic	276	Maneuvering Loads, Wing	282
See also	210	Mass and Gyroscopic Problems, Aerodynamic	275
Aeroelasticity		Matching, Compressors	381
Loading - Fuselage, Nacelle, and		Matching, Turbines	384
Canopy		Materials	471
Loading, Rotating Wings	lines .	See also	TIL
Loading, Tail	3 14	Materials, Types	
Loading, Wing	WIN	Operating Stresses and Conditions	
Loading - Fuselage, Nacelle, and Canopy	289	of Materials	
Loading, Rotating Wings	291	Properties of Materials	
Loading, Tail	286	Materials, Airframe - Operating Stresses	508
See also	200	Materials, Miscellaneous	491
Buffeting and Gust Loads, Tail	2011	Materials, Propulsion - Operating Stresses	
Maneuvering Loads, Tail	TAR STORY	See also	000
Steady Loads, Tail	sig Tri.	Properties of Materials	
	The state of		

Mixed Flow Compressors Mixed Flow Turbines Mixture Control, Reciprocating Engines Models See Aircraft N Nacelle Loading See Nacelle Loading See Mixed Flow Compressors 379 Rocket Fuels Parachutes Parachutes Performance, Airplanes Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms 389 Pitch Distribution, Propellers 149	Subject	Page	<u>Subject</u>	Page
Materials Research Technique See Structures and Materials Research Technique Materials, Types See also Adhesives Adusinum Ceramics Heat Resisting Alloys Laminated Materials Magnesium Muterials, Miscellaneous Plastics Protective Coatings Sandwich Materials Steels Meteorological Instruments See: Gas Turbines Atmosphere Ice Fornation, Atmosphere Metering and Control Parameters See: Gas Turbines Ream and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Missiles, Specific Types Mixed Flow Compressors Mixed Flow Compressors Mixed Flow Turbines See Aircraft Nacelle Loading See Nosse, Airplane Nose, Airplane Nose, Airplane Nose Inlets, Internal Aerodynamics See Inlets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Incets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Incets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Incets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Incets, Nose - Internal Aerodynamics Nose Inlets, Internal Aerodynamics See Inlets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Incets, Nose - Internal Aerodynamics Notelear Radiation, Effects - Properties of Materials Noclear Radiation, effects - P	Materials Basearch Equipment	571	Nevigation	597
See Structures and Materials Research Technique Materials, Types 472 See also Adhesives Aluminum Ceramics Fabrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Steels Woods Meteorological Instruments See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Gas Turbines Reciprocating Engines Missiles See also Camponents in Combination, Missiles Misselles, Specific Types Missel Flow Turbines Missel Flow Turbines Missel Flow Turbines See Aircraft Nacelle Loading See See Nomenclature, Aeronautics Nomal Pressures in Structures Nose Inlets, Internal Aerodynamics Nose Inlets, Internal Aerodynamics Nose Shape, Ducted Bodies 122 Nozzles, Internal Aerodynamics Nozzles, Internal Aerodynami		311		
Structures and Materials Research Technique Materials, Types See also Adhesives Adhesives Aluminum Geramics Febrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Seealso Seealso Seealso Meteorological Instruments See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Gas Turbines See also Missiles See also Mixed Flow Compressors Mixed Flow Compressors Mixed Flow Compressors Mixed Flow Turbines See Aircraft Nancelle Loading Nacelle Loading See See Aircraft Normal Pressures in Structures Nose Inlets, Internal Aerodynamics See also Inlets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies 122 Nozzles, Internal Aerodynamics Nose Inlets, Internal Aerodynamics See Inlets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Onder Inlets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Nose Shape, Ducted Bodies Nose Shape, Ducted Bodies Onder Inlets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Onder Inlets, Nose - Internal Aerodynamics Inlets, Nose - Internal Aerodynamics Inlets, Nose - Internal Aerodynamics See also Nozale Bodies Onder Inlets, Nose - Internal Aerodynamics Soe Inlets, Nose - Internal Aerodynamics On Coll Colers Operating Conditions, Propellers Anougation, Meterials Noise Inlets, Intenal Aerodynamics See Inlets, Intenal Aerodynamics See Inlets, Intenal Aerodynamics On Coll Colers Operating Conditions, Propellers Noise Inlets, Nose - Intenal Aerodynamics Soe Inlets, Intenal Aerodynamics See Internal Aerodynamics On Coll Colers Operating Conditions, Propellers Noise Inlets, Intenal Aerodynamics Soe Internal Aerodynamics Noise Inlets, Intenal Aerodynamics Noise Inlets, Intenal Aerodynamics Soe Internal Aerodynamics Noise Inlets, Intenal Aer				
Materials, Types See also Adhesives Adhesives Alminum Ceramics Fabrics Heat Resisting Alloys Laminated Materials Magnesium Mouterials, Miscellaneous Plastics Sandwich Materials Woods Meteorology See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Gas Turbines See also Components in Combination, Missiles Missiles See also Components in Combination, Missiles Missel Flow Turbines Mixed Flow Curbines See Aircraft Noaclle Loading See See Aircraft Noaclle Loading See See See See Aircraft Noaclle Loading See See See Inlets, Nose - Internal Aerodynamics Nose Shape, Ducted Bodies Nose Shape, Ducted Bodies Nose Shape, Ducted Bodies Nozeles, Internal Aerodynamics Nose Shape, Ducted Bodies Noce Shape, Ducted Bodies Noclear Radiation, Effects - Properties of Materials Noclear Radiation, Effects - Proper				
See also Adhesives Alminum Ceramics Fabrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Weteorological Instruments See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines See also Reciprocating Engines See also Components in Combination, Missiles Missiles, Specific Types Missel Flow Campressors Mixed Flow Campressors Mixed Flow Turbines See Aircraft Nacelle Loading Nacelle Loading Nacelle Loading See Nose Shape, Ducted Bodies Nozzles, Internal Aerodynamics Noze Shape, Ducted Bodies Nozzles, Internal Aerodynamics Sofoxzles, Internal Aerodynamics Sofoxzles, Internal Aerodynamics Noze Shape, Ducted Bodies Nozzles, Internal Aerodynamics Sofoxzles, Internal Aerodynamics Sofoxzles Intersited Bodynamics Sofoxzles Intersited Bo				401
See also Adhesives Adminum Ceramics Fabrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Woods Meteorological Instruments See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ream and Pulse Jets Ram and Pulse Jets Ram and Pulse Jets Reciprocating Engines Missiles, Specific Types Missiles, Specific Types Mixed Flow Compressors Mixed Flow Compressors Mixed Flow Compressors Mixed Flow Compressors Mixed Flow Turbines Mixed		179		
Adhesives Aluminum Ceramics Fabrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Moods Meteorological Instruments See also Meteorology See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Reckets Ram and Pulse Jets Ram and Pulse Jets Ram and Pulse Jets Reckets Missiles See also Components in Combination, Missiles Missiles, Specific Types Mixed Flow Compressors Mixed Flow Turbines Mixed Flow Turbines Nacelle Loading See Nooze Shape, Ducted Bodies Nozzles, Internal Aerodynamics 131 Nozcles, Internal Aerodynamics 132 Nozzles, Internal Aerodynamics 131 Nozelses, Internal Aerodynamics 131 Nozelses, Internal Aerodynamics 131 Nozelses, Internal Aerodynamics 131 Nozcles, Internal Aerodynamics 131 Nozcles, Internal Aerodynamics 131 Nozcles, Internal Aerodynamics 131 Nozles, Internal Aerodynamics 131 Octobers Operating Redits on, Effects - Properties 0f Materials Nozles, Internal Aerodynamics 140 Operating Problems See also Heating and Ventilating, Airplane Ice Prevention and Removal Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques See also Materials See also Materials See also Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Materials - Operati		412		
Aluminum Ceramics Fabrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Sandwich Materials Woods Meteorological Instruments See also Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Ram and Pulse Jets Rockets Rockets See also Components in Combination, Missiles Missiles, Specific Types Missel Flow Compressors Misture Control, Reciprocating Engines Models See Aircraft Nacelle Loading See Nacelle Loading See Nacelle Loading See Naterials Nozles, Internal Aerodynamics Sof Materials Octation, Effects - Properties of Materials Operating Problems See also Heating and Ventilating, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Ice Prevention and Removal Lightning Hazards to Aircr	[18] [18] [18] [18] [18] [18] [18] [18]			100
Ceramics Fabrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Woods Meteorological Instruments See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets See also Missiles See also Missiles See also Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Mixed Flow Compressors Mixed Flow Models See Aircraft Navigation Noise, Airplane Operating Problems, General Physiological Problems See also Materials See also Materials Oil Coolers Operating Problems See also Heating and Ventilating, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Operating Problems, General Physiological Problems, General Physiological Problems Research Technique See also Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Oxidants See Materials, Propulsion - Operating Stresses Oxidants See Aircraft Navigation Nacelle Loading Stresses Naterials, Propulsion - Operating Stresses Oxidants See Parachutes Performance, Airplanes Physiological Problems See Performance, Airplanes See Piloting Techniques See				
Fabrics Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Woods Meteorological Instruments See also Atmosphere Ice Fromation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Rockets See also Components in Combination, Missiles Missiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Mixed Flow Compressors Mixed Flow Mi				131
Heat Resisting Alloys Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Steels Woods Meteorological Instruments See also Meteorology See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Reciprocating Engines Missiles See also Components in Combination, Missiles Missiles, Specific Types Mixed Flow Mixed Flow Mixed Flow Mixed Flow Mixed Flow Models See Aircraft Nacelle Loading Nacelle Loading See Oil Coolers Operating Conditions, Propellers 163 Operating Conditions, Propellers 163 Operating Conditions, Propellers 163 Operating Problems See also Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques Safety, Operating Stresses and Conditions of Materials Materials See also Materials, Airframe - Operating Stresses Oxidants See Rocket Fuels Noiseles Parachutes Performance, Airplanes Piloting Techniques Stresses Oxidants See Performance, Airplanes Piloting Techniques Signification Perating Problems Piloting Techniques Stresses Oxidants See also Oxidants See Performance, Airplanes Physiological Problems Signification Piloting Techniques Signification Piloting Techniques Signification Piloting Techniques Signification Piloting Techniques Signification Significatio				500
Laminated Materials Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Steels Woods Meteorological Instruments See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Reciprocating Engines Missiles See also Components in Combination, Missiles Missed Flow Mixed Flow Mix	이 아이를 맞게 하시네요. 그리아 그리아 그렇게 하는 데이를 보고 있는 데일 없네요. 이 이 집에 되어 있다.		of Materials	500
Magnesium Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Steels Woods Meteorological Instruments See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines See: Gas Turbines Reciprocating Engines Alsisiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Turbines Mixed Flow Turbines See See Aircraft Navigation Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques Safety, Operatings Operating Problems Poperating Problems Problems, General Physiological Problems Poperating Problems See also Operating Problems Operating Problems Problems, General Operating Problems Poperating Problems Poperating Problems Safety, Operating Problems Operating Problems Poperating Problems See also Operating Problems Operating Problems Operating Problems Piloting Techniques Safety, Operating Stresses and Conditions of Materials See also Materials, Airframe - Operating Stresses Oxidants See Materials, Propulsion - Operating Stresses Oxidants See Rocket Fuels Note of the problems Performance, Airplanes Piloting Techniques See Performance, Airplanes Piloting Techniques See Poperating Conditions, Propellers See also Heating and Ventilating, Airplane Ice Prevention and Removal Lightning Hazards to Aircraft Navigation Noise, Airplane Operating Problems Piloting Techniques Safety, Operating Problems See also Materials, Airframe - Operating Stresses Oxidants See also Operating Problems Poperating Problems Piloting Techniques Performance, Airplanes Piloting Techniques Piloting Techniques Pipes, Internal Aerodynamics Piloting Techniques Pipes, Internal Aerodynamics Piloting Techniques Pipes, Internal Aerodynamics Piloting Techniques Piloting Techniques Pipes, Internal Aerodynamics Piloting Techniques Pipes, Internal Problems Piloting Techniques Pipes, Internal Accodynamics Piloting Techniques Pipes, Internal Accodynamics Piloting Techniques Piloting Techniques Piloting Techniques Piloting Techniques Piloting Tech			O WASHINGTON	
Materials, Miscellaneous Plastics Protective Coatings Sandwich Materials Steels Woods Meteorological Instruments See also Meteorology See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Missiles See also Missiles See also Materials Materials See also Materials Materials See also Materials, Airframe - Operating Stresses Mixed Flow Mixed Flow Compressors Mixed Flow Turbines See Aircraft Navigation Noise, Airplane Operating Problems, General Physiological Problems See also Materials See also Materials See also Materials See also Operating Airplane See Operating Problems Operating Problems Stresses and Conditions of Materials See also Materials See also Materials See also Operating Problems Stresses and Conditions Operating Problems Stresses Operating Problems Operating P			O'1 C 1	100
Plastics Protective Coatings Sandwich Materials Steels Woods Meteorological Instruments See also Meteorology See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets See also Missiles See also Missiles See also Materials See also Materials See also Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques Safety, Operating Problems Problems Properating Problems Noise, Airplane Operating Problems Noise, Airpl				
Protective Coatings Sandwich Materials Steels Woods Meteorological Instruments See also Meteorology See also Motification, Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Ram and Pulse Jets Reciprocating Engines Reciprocating Engines See also Missiles See also Materials See also Motification, Airplane See also Motification, Aircraft Novigation Noise, Airplane Operating Problems Piloting Techniques See also Materials See Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Materials See				
Sandwich Materials Steels Woods Meteorological Instruments See also Meteorology See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Mixed Flow Mixed Flow Turbines See Aircraft Namigation Noise, Airplane Operating Problems, General Physiological Problems Safety, Operations Operating Problems, General Operating Stresses and Conditions of Materials See also Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Oxidants See Rocket Fuels Parachutes Performance, Airplanes Physiological Problems Sele Parachutes Performance, Airplanes Physiological Problems Sele Piloting Techniques Stresses Materials, Airframe - Operating Stresses Oxidants See Rocket Fuels Namical Flow Ill Piloting Techniques Stresses Materials, Airframe - Operating Stresses Oxidants See Rocket Fuels Parachutes Performance, Airplanes Physiological Problems Sele Piloting Techniques See Performance, Airframe - Operating Stresses Oxidants See Performance, Airplanes Piloting Techniques See Performance, Airplanes See Performance, Airplanes See Piloting Techniques Safety, Operations Operating Problems See also Operating Problems See also Operating Problems Opera				521
Steels Woods Woods Lightning Hazards to Aircraft Navigation Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques Safety, Operating Problems Safety, Operating Probl				
Meteorological Instruments 558 Meteorology 511 See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines 352 Ram and Pulse Jets 353 Reciprocating Engines 345 See also Components in Combination, Missiles Missiles, Specific Types Mixed Flow Mixed Flow Compressors 379 Mixture Control, Reciprocating Engines 346 Models See Aircraft Navigation Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques Safety, Operations Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Materials, Airframe - Operating Stresses Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Materials Problems Performance, Airplanes Performance, Airplanes Physiological Problems Parachutes Performance, Airplanes Piloting Techniques See Performance, Airplanes Piloting Techniques Signature Si				
Meteorological Instruments Meteorology See also Atmosphere Ice Fornation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Mixed Flow Mixed Flow Turbines Mixed Flow Turbines Mixed Flow Turbines Models See Aircraft N Nacelle Loading See Navigation Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques Safety, Operations Operating Problems, General Operating Problems, General Operating Problems, General Operating Problems Research Technique Safety, Operating Stresses and Conditions of Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Oxidants See Rocket Fuels P Parachutes Parachutes Parachutes Parachutes Parachutes Performance, Airplanes Physiological Problems Piloting Techniques Stresses Materials Piston and Cylinder Mechanisms Sag Pitch Distribution, Propellers 149	[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]			
Meteorology See also Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Mixed Flow Mixed Flow Turbines Mixed Flow Turbines Mixed Flow Turbines Models See Aircraft Noise, Airplane Operating Problems, General Physiological Problems Piloting Techniques Safety, Operations Operating Problems, General Operating Problems, General Operating Problems Poperating Problems Poperating Problems Poperating Problems Aisearch Technique Operating Problems Poperating Problems Aisearch Technique Operating Problems Poperating Problems Aisearch Technique Operating Problems Aisearch Operating Proble	이번 그 집에 보면 있다면 하는데 되었다면 보면 가장하면 보고 있는데 되었다면 내용하다 그리고 있다.	-		
Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Mixed Flow Mixed Fl				
Atmosphere Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Missiles, Specific Types Mixed Flow Mixed Flow Mixed Flow Compressors Mixture Control, Reciprocating Engines See Aircraft N N Nacelle Loading See Metering and Control Parameters Safety, Operations Operating Problems, General Operating Problems Research Technique Safety, Operations Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Oxidants See Rocket Fuels Parachutes Parachutes Parachutes Parachutes Performance, Airplanes Piloting Techniques Safety, Operations Operating Problems See Stresses and Conditions of Materials See Materials, Propulsion - Operating Stresses Materials, Propulsion Stresses Materials, Propulsi		511		
Ice Formation, Atmosphere Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Missiles, Specific Types Mixed Flow Mixed Flow Mixed Flow Compressors Mixture Control, Reciprocating Engines See Aircraft N Nacelle Loading See Metering Atmosphere Safety, Operations Operating Problems, General Operating Problems Research Technique Safety, Operations Operating Problems Research Technique Safety, Operating Problems Research Technique Safety, Operations Operating Problems Research Technique Safety, Operating Problems Research Technique Safety, Operating Problems Research Technique Safety, Operating Problems, General Operating Problems, Centroliques Safety, Operations Operating Problems, Centroliques Operating Problems, Centroli				
Metering and Control Parameters See: Gas Turbines Ram and Pulse Jets Ram and Pulse Jets Rockets Missiles See also Components in Combination, Missiles Missiles, Specific Types Mixed Flow Mixed Flow Mixed Flow Turbines Mixture Control, Reciprocating Engines See Aircraft N Nacelle Loading See Materinal Safety, Operations Operating Problems, General Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Naterials Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Naterials Operating Problems Research Technique Operating Stresses and Conditions of Materials See also Operating Problems Operating Problems Research Technique Operating Stresses Oxidants See also Oxidants See Naterials, Propulsion - Operating Stresses Oxidants See Parachutes Parachutes Performance, Airplanes Physiological Problems Physiological Problems Piloting Techniques See Pipes, Internal Aerodynamics See Pitch Distribution, Propellers				
See: Gas Turbines Ram and Pulse Jets Reciprocating Engines See also Components in Combination, Missiles Missiles, Specific Types Missel Flow Mixed Flow Mixed Flow Compressors Mixed Flow Turbines See Aircraft N N Nacelle Loading See Nacelle Loading See Operating Problems, General Operating Problems Research Technique See Aircraft Operating Problems, General Operating Problems, General Operating Problems, General Operating Problems Research Technique See Aircraft Operating Problems, General Operating Problems Research Technique See Aircraft Naterials Operating Problems, General Operating Problems Research Technique See Aircraft Operating Problems Research Technique See Aircraft Naterials Operating Problems Propulsion Operating Problems Aircraft Naterials Operating Problems Propulsion Operating Operating Propulsion Operating Propulsion Operating Propulsion				
Gas Turbines Ram and Pulse Jets Ram and Pulse Jets Reciprocating Engines Reciprocating Engines Reciprocating Engines Reciprocating Engines See also Components in Combination, Missiles Missiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Mixed Flow Turbines Mixed Flow Turbines Mixed Flow Turbines Models See Aircraft N N Nacelle Loading See Operating Problems Research Technique Materials Operating Stresses and Conditions of Materials See also Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Oxidants See Rocket Fuels Parachutes Performance, Airplanes Physiological Problems Physiological Problems Piloting Techniques Piston and Cylinder Mechanisms Pitch Distribution, Propellers 149				
Ram and Pulse Jets 353 Reciprocating Engines 345 Rockets 353 Missiles 52e also 52e also 535 Components in Combination, Missiles 52e Also 535 Mixed Flow 11 52e 52e 62e 62e 62e 62e 62e 62e 62e 62e 62e 6	[10 1 [2] [2] [2] [2] [2] [2] [2] [2] [2] [2]			542
Reciprocating Engines Rockets				588
Rockets Missiles See also Components in Combination, Missiles Missiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Turbines Mixture Control, Reciprocating Engines Models See Aircraft N Nacelle Loading See Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Propulsion - Operating Stresses Materials, Airframe - Operating Stresses Materials, Propulsion - Operating Stresses Oxidants See Performence, Airplanes Pulloting Techniques Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms Pitch Distribution, Propellers 149				
Missiles See also Components in Combination, Missiles Missiles, Specific Types Missiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Turbines Mix			Materials	507
See also Components in Combination, Missiles Missiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Turbines Mixed Flow Turbin		353		
Components in Combination, Missiles Missiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Turbines Mixture Control, Reciprocating Engines Models See Aircraft N N Nacelle Loading See Materials, Propulsion - Operating Stresses Oxidants See Rocket Fuels P P P P P P P P P P P P P P P P P P		194	Materials, Airframe - Operating	
Missiles, Specific Types Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Turbines Mixed Flow Turbines Mixture Control, Reciprocating Engines Models See Aircraft N Nacelle Loading See Missiles, Specific Types 195 Oxidants See Paracket Fuels Parachutes Parachutes Performance, Airplanes Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Pipes, Internal Aerodynamics 132 Piston and Cylinder Mechanisms 389 Pitch Distribution, Propellers 149				
Missiles, Specific Types Mixed Flow Mixed Flow Compressors Mixed Flow Turbines Mixture Control, Reciprocating Engines Models See Aircraft N Nacelle Loading See Parachutes Physiological Problems Piloting Techniques Piston and Cylinder Mechanisms Pitch Distribution, Propellers 195 Oxidants See Rocket Fuels Parachutes Parachutes Performance, Airplanes Piloting Techniques Piston and Cylinder Mechanisms Pitch Distribution, Propellers 149			Materials, Propulsion - Operating	
Mixed Flow Compressors Mixed Flow Turbines Mixture Control, Reciprocating Engines Models See Aircraft N Nacelle Loading See Mixed Flow Compressors Archives Parachutes Parachutes Performance, Airplanes Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms See Pitch Distribution, Propellers 149			Stresses	
Mixed Flow Compressors Mixed Flow Turbines Mixture Control, Reciprocating Engines Models See Aircraft N Nacelle Loading See Nacelle Loading See Mixed Flow Compressors 379 Rocket Fuels Parachutes Parachutes Performance, Airplanes Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms 389 Pitch Distribution, Propellers 149		195	Oxidants	
Mixture Control, Reciprocating Engines 346 Models See Aircraft N N Nacelle Loading See Nacelle Loading See Aircraft Nacelle Loading See Nixture Control, Reciprocating Engines 346 Parachutes Parachutes Performance, Airplanes 190 Physiological Problems 541 Piloting Techniques 539 Pipes, Internal Aerodynamics 132 Piston and Cylinder Mechanisms 389 Pitch Distribution, Propellers 149	Mixed Flow	11	See .	
Mixture Control, Reciprocating Engines 346 Models See Aircraft N N N Nacelle Loading See Parachutes Parachutes Performance, Airplanes Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms Pitch Distribution, Propellers Parachutes Parachutes Parachutes Pipes, Airplanes Piloting Techniques Pipes, Internal Aerodynamics		379	Rocket Fuels	
Models See Performance, Airplanes Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms Pitch Distribution, Propellers		383		
See Aircraft Performance, Airplanes Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms See Pitch Distribution, Propellers 149	Mixture Control, Reciprocating Engines	346	P	
Aircraft Physiological Problems Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms See Pitch Distribution, Propellers 149	Models		Parachutes	296
Piloting Techniques 539 Pipes, Internal Aerodynamics 132 Piston and Cylinder Mechanisms 389 Pitch Distribution, Propellers 149	See		Performance, Airplanes	190
Nacelle Loading See Piloting Techniques Pipes, Internal Aerodynamics Piston and Cylinder Mechanisms Pitch Distribution, Propellers 149	Aircraft			541
Nacelle Loading Piston and Cylinder Mechanisms See Pitch Distribution, Propellers 149	N		Piloting Techniques	539
See Pitch Distribution, Propellers 149	N N		Pipes, Internal Aerodynamics	132
See Pitch Distribution, Propellers 149	Nacelle Loading			
	See			
Loading, Fusetage, Nacette, and Pitch and law, Propellers 158	Loading, Fuselage, Nacelle, and		Pitch and Yaw, Propellers	158
Canopy Planforms, Propellers 151	H 보이 되었다면 1000 1100 1100 1100 1100 1100 1100 11			
Nacelle-Wing Combinations, Airplanes 172 Planing Surfaces, Hydrodynamic 315	Nacelle-Wing Combinations, Airplanes	172		

Subject	Page	Subject	Page
Planing Tail Hulls See		Properties of Materials (Continued) See also	493
Seaplane Hull Variables		Flexural Properties of Materials	
Plastics	485	Nuclear Radiation, Effects -	
	419	Properties of Materials	
Plates, Structural See also	41)	Shear Properties of Materials	
		Stress-Rupture Properties of	
Curved Plates, Structural		Materials	
Flat Plates, Structural	380	Structural Properties of Materials	
Positive Displacement Compressors	300	Tensile Properties of Materials	
Power Plants		Propulsion	325
See		See also	010
Propulsion Systems, Complete		Auxiliary Booster Systems	
Profiles, Complete Wings	76	Charging and Control of Engines	
Profiles, Designated, Wing Sections	40	Combustion	
Propeller Design Variables	144		
See also		Compressors	
Blade Sections, Propellers		Cooling	
Diameter, Propellers		Friction and Lubrication	
Dual Rotation, Propellers		Fuels	
Interference of Bodies, Propellers		Heat Transfer	
Mach Number Effects, Propellers		Properties of Gases	
Pitch Distribution, Propellers		Propulsion Systems, Complete	
Pitch and Yaw, Propellers		Turbines	-
Planforms, Propellers		Propulsion Materials, Operating Stresses	508
Pusher Propellers		See also	
Solidity, Propellers		Properties of Materials	
	337	Propulsion Research Equipment	569
Propeller, Ducted Engines	531	Propulsion Research Technique	586
Propeller Ice Prevention and Removal	175	Propulsion Systems, Complete	326
Propeller and Jet Interference, Airplanes		See also	
Propeller Operating Conditions	163	Ducted Propeller Engines	
Propeller Research Equipment	571	Engine Types, Comparisons	
Propeller Slipstream	160	Engines, Miscellaneous Types	
Propeller Theory	141	Jet-Driven Rotors	
Propeller Vibration and Flutter	294	Pulse Jet Engines	
Propellers	140	Ram Jet Engines	
See also		Reciprocating Engines	
Propeller Design Variables		Reciprocating Engines with Turbines	
Propeller Operating Conditions		Rocket Engines	
Propeller Slipstream		Turbo-Propeller Engines	
Propeller Theory		Turbojet Engines	
Propellers, Designated Types		Propulsion Systems Ice Prevention and	
Propellers, Designated Types	159	Removal	534
Properties of Gases	410	Protective Coatings	488
Properties of Materials	493	Protuberances, Bodies	120
See also		Pulse Jet Engines	337
Compressive Properties of Materials	o Juli	Pulse Jet Engines, Combustion	375
Corrosion Resistance Properties of		Pulse Jet Engines, Fuels	365
Materials		Pumps, Jet and Thrust Augmentors -	000
Creep Properties of Materials	VA TO	Aerodynamics	134
Fatigue Properties of Materials	01.45	Pusher Propellers	153
- 200 000 1 000 1 000 0 1 11000 000			

Subject	Page	Subject	Page
R		Regenerators	399
The second of the second of the second of the second		Research Equipment	562
Radial Flow Compressors	378	See also	302
Radial Flow Turbines	383	Free Flight Research Equipment	
Radiators	398	Materials Research Equipment	
Ram Jet Engines	338	Propeller Research Equipment	
Ram Jet Engines, Combustion	374	Propulsion Research Equipment	
Ram Jet Engines, Fuels	365	Structures Research Equipment	
Ram Jet and Pulse Jet Engines -		Towing Tanks and Impact Basins	
Charging and Control	353	Wind Tunnels	
See also			1 119
Metering and Control Parameters -		Research Techniques	574
Ram and Pulse Jets		See also	
Rarefied Gases, Flow of		Aerodynamics Research Technique	
See		Corrections, Research	
Flow of Rarefied Gases		Hydrodynamics Research Technique	
Reciprocating Engines	326	Operating Problems Research	
See also		Technique	
Compression-Ignition Engines		Propulsion Research Technique	
Spark-Ignition Engines		Structures and Materials Research	
Reciprocating Engines, Auxiliary		Technique	
Booster Systems	354	Reynolds Number Effects, Complete Wings	104
Reciprocating Engines, Charging and	001	Reynolds Number Effects, Wing Sections	62
Control	341	Riveted Connections	437
See also		Rocket Engines	338
Fuel Supply Systems, Reciprocating		Rocket Engines, Charging and Control	353
Engines		See also	
Ignition Systems, Reciprocating		Fuel Supply Systems, Rockets	
Engines		Metering and Control Parameters,	
Metering and Control Parameters,		Rockets	
Reciprocating Engines		Rocket Engines, Combustion	375
Mixture Control, Reciprocating		Rocket Fuels	365
Engines		Rockets	303
Reciprocating Engines, Combustion	369	See	
See also		Rocket Engines	
Compression-Ignition Engines,			
Combustion		Rolling Contact Surfaces	390
Spark-Ignition Engines, Combustion		See also	
Reciprocating Engines, Cooling	401	Anti-Friction Bearings	
See also		Roots-Type Compressors and Blowers	
Air Cooling, Reciprocating Engines		See	
Liquid Cooling, Reciprocating Engines		Positive Displacement Compressors	
Reciprocating Engines, Fuels	360	Rotating Wing Aircraft	195
See also	0.50	Rotating Wing Loading	291
Compression-Ignition Engines, Fuels		Rotating Wing Vibration and Flutter	295
Spark-Ignition Engines, Fuels		Rotor Theory	164
Reciprocating Engines with Turbines	334	Rotors	164
See also	M. P. C.	See also	
Compound Engines		Rotor Theory	
Gas Generator - Turbine Engines		Rotors, Experimental Studies	
Turbosupercharged Engines		Rotors, Autorotating	167
6.2	A SINT		201

Subject	Page	Subject	Page
Rotors, Experimental Studies	165	Side Exits, Ducted Bodies	123
See also		Side Inlets, Ducted Bodies	123
Rotors, Autorotating		Side Inlets, Internal Aerodynamics	
Rotors, Power Driven		See	
Rotors, Jet Driven	339	Inlets, Side - Internal Aerodynamics	
Rotors, Power Driven	165	Sleeve Bearings	388
Rudder Vibration and Flutter	294	Sliding Contact Surfaces	388
S		See also	
	500	Cylinder and Piston Mechanisms	
Safety, Operations	522	Sleeve Bearings	
Sandwich Materials	490	Slipper Plate Bearings	200
Scoops See along Hell Verickle	128	Sliding and Rolling Contact Surfaces See also	390
Seaplane Hull Variables See also	302	Gears	
		Slip Flow	26
Afterbody Shape, Seaplane Hulls Chines, Seaplane Hulls		Slipper Plate Bearings	390
Deadrise, Seaplane Hulls		Slipstream, Propellers	160
Forebody Shape, Seaplane Hulls		Slots and Slats, Complete Wings	96
Length-Beam Ratio, Seaplane Hulls		Slots and Slats, Wing Sections	53
Steps, Seaplane Hulls		Solidity, Propellers	147
Seaplanes	198	Spark-Ignition Engines	328
Seaplanes, General Studies	300	Spark-Ignition Engines, Combustion	370
Seaplanes and Hulls, Specific Types	311	Spark-Ignition Engines, Fuels	360
Section Theory	011	Spinning	262
See		Spoilers, Complete Wings	103
Wing Section Theory		Spoilers, Wing Sections	58
Section Variables, Wing Sections	31	Stability, Aerodynamic	204
See also		See also	
Camber, Wing Sections		Dynamic Stability	
Inlets and Exits, Wing Sections		Static Stability	
Surface Conditions, Wing Sections		Stability and Control, Aerodynamic	204
Thickness, Wing Sections		See also	
Thickness Distribution, Wing Sections	3	Control, Aerodynamic	
Sections, Columns - Structural	413	Flying Qualities	
Sections, Wing		Mass and Gyroscopic Problems,	
See		Aerodynamic	
Wing Sections		Spinning	
Shape Variables, Bodies	117	Stability, Aerodynamic	
See also		Stalling	
Cross Section, Bodies		Stability and Control, Hydrodynamic	320
Fineness Ratio, Bodies		See also	
Protuberances, Bodies		Directional Stability and Control,	
Surface Conditions, Bodies	2	Hydrodynamic	
Thickness Distribution, Bodies	505	Lateral Stability and Control,	
Shear Properties of Material	505	Hydrodynamic	
Shear in Structures	460	Longitudinal Stability and Control,	
Shells, Structural See also	432	Hydrodynamic Stabilizana Latanal Hydrodynamia	214
Boxes, Structural	-	Stabilizers, Lateral - Hydrodynamic See also	314
Cylinders, Structural	K-M-M	Wing-Tip Floats	
of theirs, but actual at		" ting-1 th I touts	

Subject	Page	Subject	Page
Stalling Standard Atmosphere	266 512	T	
Static Stability	205	Tabs, Vibration and Flutter	294
See also	203	Tail-Body Combinations, Missiles	195
Directional Stability, Static		Tail Loading	190
Lateral Stability, Static		See	
Longitudinal Stability, Static		Loading, Tail	
	200	Tail Shape, Ducted Bodies	123
Steady Loads, Wing	286 278	Tail Vibration and Flutter	293
Steady Loads, Wing Steels	481	See also	
Steps, Seaplane Hulls	304	Elevators and Rudders Vibration	
Strain Gages	304	and Flutter	
See		Tabs Vibration and Flutter	
Instruments		Tail, Wing and Fuselage Combination -	
C. D. D C	500	Airplanes	173
Stress-Rupture Properties of Materials	502	Taper, Complete Wings	86
Stress and Vibration, Compressors	380	Tensile Properties of Materials	496
Stress and Vibration, Turbines	384	Tension in Structures	444
Stresses and Loads, Structural See	side in	Thickness, Wing Section	34
Loads and Stresses, Structural	Mit 2	Thickness Distribution, Bodies	119
	The Real	Thickness Distribution, Wing Sections	36
Structural Properties of Materials	493	Thrust Augmentation	
Structures	411	See	
See also	things !	Auxiliary Booster Systems	
Beams, Structural	being 1	Thrust Augmentors and Jet Pumps -	134
Columns, Structural	BURE	Aerodynamics Tip Floats, Wing	314
Connections, Structural		Torsion in Structures	457
Frames, Gridworks, and Trusses Loads and Stresses, Structural	4000	Towing Tanks and Impact Basins	568
Plates, Structural		Triplanes and Biplanes	202
Shells, Structural		Trusses, Frames and Gridworks	416
Weight Analysis, Structural		Tubular Columns, Structural	412
		Turbine Blade Materials	
Structures and Materials Research	501	See	
Technique	584	Ceramics	
Structures Research Equipment	572	Heat Resisting Alloys	
Submerged Inlets	129	Protective Coatings	
Subsonic Flow	8	Steels	
Summaries, Technical	590	Turbine Disk Materials	
Supercharged Engines See		See	
Turbosupercharged Engines		Heat Resisting Alloys	
	10	Steels	
Supersonic Flow	13	Turbine Engines	
Surface Conditions, Bodies	119	See	
Surface Conditions, Complete Wings	89	Propulsion Systems, Complete	051
Surface Conditions, Friction and	387	Turbine Engines, Combustion	374
Lubrication Surface Conditions Wing Sections	38	Turbine Engines, Fuels	365
Surface Conditions, Wing Sections Surface Craft, Hydrodynamics	323	Turbine Flow Theory and Experiment See also	382
Sweep, Complete Wings	82	Axial Flow Turbines	
Succession of the succession o	02	TANGET FOR AGIOTIES	

Subject	Page	Subject	Page
The First Control of the Control of	202	Walded Carrections	440
Turbine Flow Theory and Experiment	382	Welded Connections Wind Tunnels	563
(Continued)		Windshield Ice Prevention and Removal	533
See also		Wing-Body Combination, Missiles	195
Mixed Flow Turbines Radial Flow Turbines		Wing-Fuselage Combination, Airplanes	170
	336	Wing Loading	
Turbine-Gas Generator Engines Turbines	382	See	
See also	302	Loading, Wing	
Cooling, Turbines		Wing-Nacelle Combination, Airplanes	172
Matching, Turbines		Wing Section Theory	27
Stress and Vibration, Turbines		Wing Sections	27
Turbine Flow Theory and Experiment		See also	
Turbines, Internal Aerodynamics	138	Boundary Layer, Wing Sections	
Turbines, with Reciprocating Engines		Controls, Wing Sections	
See		Designated Profiles, Wing Sections	
Reciprocating Engines with Turbines		High Lift Devices, Wing Sections	
Turbo-Propeller Engines	337	Mach Number Effects, Wing Sections	
Turbojet Engines	336	Reynolds Number Effects, Wing Sections	
Turbosupercharged Engines	334	Section Variables, Wing Sections	
Turbulence, Gusts	514	Wing Section Theory	
Turbulent Flow	20	Wing, Tail and Fuselage Combination -	170
Turbulent-Flow Combustion	368	Airplanes	173
V		Wings and Tails, Ice Prevention and	532
V and to the same		Removal	
Ventilation		Wing Theory, Complete Wings	70
See		Wing-Tip Floats	314
Heating and Ventilating, Airplane		Wing Variables, Complete Wings	75
Vibration and Flutter	292	See also	
See also		Aspect Ratio, Complete Wings	
Vibration and Flutter, Bodies	1	Inlets and Exits, Complete Wings	
Vibration and Flutter - Propellers,		Profiles, Complete Wings	
Fans and Compressors		Surface Conditions, Complete Wings	
Vibration and Flutter, Rotating Wings		Sweep, Complete Wings Taper, Complete Wings	
Vibration and Flutter, Tails		Wing Vibration and Flutter	292
Vibration and Flutter, Wings and		Wings	27
Ailerons	294	See also	2.
Vibration and Flutter, Bodies	294	Wing Sections	
Vibration and Flutter - Propellers,	294	Wings, Complete	
Fans and Compressors Vibration and Flutter, Rotating Wings	295	Wings, Complete	69
Vibration and Flutter, Tails	293	See also	
Vibration and Flutter, Wings and	290	Boundary Layer, Complete Wings	
Ailerons	292	Controls, Complete Wings	
Vibration and Stress, Compressors	380	High Lift Devices, Complete Wings	
Vibration and Stress, Turbines	384	Mach Number Effects, Complete Wings	
Viscous Flow	16	Reynolds Number Effects, Complete	
See also	10	Wings	
Jet Mixing	100	Wake, Complete Wings	
Laminar Flow		Wing Theory, Complete Wings	
Turbulent Flow		Wing Variables, Complete Wings	
	EMEL A	Woods	487
W		V	
Wake, Complete Wings	111	The state of the s	
Weight Analysis, Structural	469	Yaw and Pitch, Propellers	158
neight marysis, befuccurar	10)	ian and ricen, riopetiers	100

